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ABSTRACT

This document constitutes the United States Education for All 2000 Assessment Report. The report was organized and prepared with the oversight of an eight-member commission made up of representatives of both government and private organizations in the United States. As the United States continues to improve its educational system, it remains deeply committed to engagement in international education and to sharing its experiences with others. The following activities, essential to improving education over the next 15 years, offer opportunities for collaboration with other countries as the nations of the world work together toward the goal of increased opportunities for education for all: (1) increase educational quality; (2) increase access to formal schooling and other forms of education; (3) strengthen the skills of new and experienced teachers; (4) explore the strengths of various educational technologies and enhance access to them; (5) increase international comparisons and assessments; and (6) pursue an agenda of continuous learning from early childhood on. (Contains 97 references and 147 endnotes.) (BT)

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EDUCATION FOR ALL
A Global Commitment
A Report of the United States to the International Consultative Forum on Education for All

by

Edward B. Fiske and Barbara O'Grady
The Academy for Educational Development

January 2000

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term gains in the emotional or cognitive development of the child, improvements in educational outcomes, reduced levels of criminal activity, and improvements in health-related indicators, such as child abuse. The researchers also concluded that, at least for some disadvantaged children and their families, government funds invested early in the lives of children result in compensating decreases in government expenditures later.[9]

Another study by Arthur J. Reynolds and other researchers at the University of Wisconsin also documented benefits of early intervention. It concluded, "The hundreds of studies of demonstration and large-scale programs that now exist provide very strong evidence that most programs of relatively good quality have meaningful short-term effects on cognitive ability, early school achievement and social adjustment. There is also increasing evidence that interventions can produce middle-to longer-run effects on school achievement, special education placement, grade retention, disruptive behavior and delinquency and high school graduation."[10]

Researchers studying these issues are quick to point out that much has yet to be learned about which students benefit most from such interventions and how programs should be targeted to achieve maximum efficiency. Most analysts agree that, as a National Research Council report, "Making Money Matter," put it, "early intervention services provided to the disadvantaged have greater payoffs than services provided to children whose home environments do not place them at educational risk."[11] Researchers also agree that the quality of programs is important, that long-term cognitive benefits will depend at least in part on the effectiveness of subsequent schooling, and that such benefits must be evaluated in light of physical health, nutrition, and family benefits associated with program participation.

2. Universal access to, and completion of, primary/basic education

The United States has achieved education for all at the primary level. Enrollment at the secondary level has grown, both in absolute terms and as a proportion of the student-age population, and attainment rates compare favorably with those of other industrial countries. Particular progress has been made in enrollment of students from racial and ethnic minorities, students for whom English is a second language, and students with disabilities.

The documents that emerged from Jomtien emphasized that definitions of education for all must necessarily vary from country to country. As already noted, the United States has achieved universal basic education at the primary school level, but it has not yet reached the point where all students obtain a high school diploma, which is now a necessity for gainful employment. The United States differs from many other countries in that compulsory schooling ends at age 16, thus mak- 15

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Foreword

I am delighted to submit this report from the United States to the International Consultative Forum on Education For All reviewing the experience and continuing commitment of many organizations and individuals throughout the United States to the EFA goals established at Jomtien ten years ago. Many of the individuals and organizations that have contributed to this report have worked steadily on addressing critical education needs within the United States. Others have been devoted to collaborative efforts with education ministries and communities in countries around the world to improve education in those countries using U.S. bilateral assistance and other private contributions.

This report reflects the deep commitment many Americans have to address personally, and through community, private, and national public organizations, the needs of education for all children in the United States. The report fully recognizes that, in comparison with many other countries, the approach in the United States is not primarily determined by a single federal system of education, but is primarily dependent upon the efforts made at the local community level and at the state level. Thousands of Americans are also engaged in international educational development through private non-governmental organizations and voluntary organizations and with the several agencies of the U.S. government, particularly the United States Agency for International Development and the U.S. Department of Education. Through technical assistance, advisory services, and some level of direct financial support, these agencies support the further development of Education For All in countries around the world.

During this ten-year period since Jomtien, Americans have been engaged in addressing Education For All goals, in collaboration with their colleagues, in more than 50 countries, particularly in Africa, Latin America, and Asia. Also, throughout this period, many in federal, state, and private organizations have participated in the development of comparative studies of education achievement among countries, including the United States, aimed at helping all countries together to address critical needs in education quality and to find new and improved ways to assess progress toward the EFA goals.

I want to express my thanks to my colleagues, Edward Fiske and Barbara O'Grady, the principal authors of this report, and to the members of the Oversight Commission who worked together from both public and private agencies to review drafts of the report. Many of the advisors' ideas and suggestions have been incorporated into the report. However, the Academy for Educational Development takes full responsibility for the perspectives, content, and any errors or omissions in it.

The Academy for Educational Development, as a private, independent, non-governmental and non-profit organization with a mission to improve educational quality and access, is honored to have this opportunity to bring together in this brief volume the experiences and contributions of so many people and institutions related to the important goals of Education For All. Our passage into the year 2000, the start of a new millennium and a new decade, must serve as the stimulus for all of us to join together in continuing to accomplish the goals set at Jomtien and to bring a renewed commitment to them.

Jomtien was a hallmark in establishing the collaboration necessary among public, private, and non-governmental organizations to establish the EFA goals. That same collaboration will continue to be the hallmark and the foundation upon which the accomplishment of these goals and new ones is possible.

Stephen F. Moseley
President and Chief Executive Officer
Academy for Educational Development

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We owe particular thanks to Kate Pearson, research associate, without whose excellent work gathering and verifying information, analyzing data, and conducting interviews we could not have written this report. Academy for Educational Development staff members volunteered their time to assist in a variety of other ways: Eilcen D'Andrea helped produce the bibliography and endnotes; Kaaren Christopherson did proofreading; Juan Carlos Toscano assisted with revisions of the final report; Olivia Marinescu and John Engels helped create charts; and Natalie Buda designed the report cover and layout. Jean Bernard, Academy consultant, copy edited the report. We thank them all for their contributions.

Finally, we wish to thank Stephen F. Moseley, Academy president and CEO, for his insights into EFA and for establishing the Oversight Commission and funding this report.

INTRODUCTION

In March 1990, the World Conference on Education for All was convened in Jomtien, Thailand, to address concerns about the inadequate provision of basic education, especially in developing countries. The conference was attended by 1,500 participants from 155 countries and included representatives from 160 intergovernmental and non-governmental organizations.

Participants in the conference adopted a *World Declaration on Education for All* that reaffirmed the concept of education as a fundamental human right and urged the nations of the world to intensify their efforts to meet the basic learning needs of all children, youth, and adults. Participants also approved a *Framework for Action to Meet Basic Learning Needs* that spells out specific targets and strategies for reaching the goal of education for all, or EFA.

The *Framework* anticipated the need for a ten-year review of progress toward the goal of universal basic education. Consequently, the International Consultative Forum on Education for All (EFA Forum), which was established to follow up the Jomtien Conference, organized the EFA 2000 Assessment. This is a major global effort that will document progress made since 1990, identify priorities and promising strategies for future activities, and promote appropriate changes in national and international plans of action. The Assessment will provide an important basis for discussions at the World Education Forum to be held in Senegal in April 2000.

As part of the Assessment, the EFA Forum has invited each participating country to draft a Country EFA report describing the extent to which it has achieved the goal of universal basic education within its own borders, chronicling its activities in promoting this objective domestically and internationally, and offering thoughts and suggestions regarding appropriate policy directions for the future.

This document constitutes the U.S. EFA 2000 Assessment Report. The report was organized and prepared by the Academy for Educational Development with the oversight of an eight-member Commission made up of representatives of both government and private organizations in the United States. The members of the Commission and their organizations were participants in the 1990 Jomtien meeting and have continued to address education development needs in the United States and/or abroad.

The Academy prepared the report at the request of the EFA Secretariat. The final responsibility for the perspectives and information contained in the report is that of the Academy. While some officials of U.S. Government agencies participated in the Oversight Commission, the report is not an official report of the United States Government. The work was carried out in consultation with numerous experts in

the field, including representatives of non-governmental organizations, education associations, and representatives of various United Nations agencies. The principal authors of the report are Edward B. Fiske and Barbara O'Grady whose background is described briefly in the Appendix.

United States Follow-up Activities to Jomtien

In the months following Jomtien, a U.S. Coalition for Education for All (USCEFA) was formed in support of the goals of the *Framework* and as a means of bridging domestic and international education agendas. The board of directors included representatives of the U.S. Department of Education and a number of major professional and research organizations.

USCEFA responded to questions from domestic educators about international education innovations, and it worked with major U.S. organizations, led by the Council of Chief State School Officers, to write standards for an international studies curriculum. USCEFA held three major conferences and produced a newsletter and a number of other publications, among them the first major study on mass media and education, "The Whole World Is Watching: An International Inquiry into Media Involvement in Education." It examined the role and value of informal education through the mass media, documented ways in which educators and media producers could work together to promote policy changes, and explored parental involvement in education.

The original USCEFA Coalition ceased functioning in 1996. In 1997, a new coalition was formed and named the International Education and Training Coalition. This is a broad group of more than 60 non-governmetal organizations that advocate for increased United States investments in the full range of education needs in developing countries.

The report that follows is organized in two parts to reflect the dual engagement of the United States in its own education reform and in education activities aimed at assisting other countries.

EDUCATION FOR ALL IN THE UNITED STATES

The Status of Education For All in the United States

In challenging the nations of the world to pursue the goal of universal basic education, the *Framework for Action to Meet Basic Learning Needs* specified six "target dimensions" to be used as a basis for setting intermediate- and long-term goals and for measuring progress toward the goal of EFA. These target dimensions were:

1. Expansion of early childhood care and developmental activities, especially for poor, disadvantaged, and disabled children.

2. Universal access to, and completion of, primary education by the year 2000.

3. Improvement in learning achievement.

4. Reduction of the adult illiteracy rate, especially the disparity between male and female rates.

5. Expansion of basic education and training in other essential skills required by youth and adults.

6. Increased acquisition by individuals and families of the knowledge, skills, and values required for better living made available through all education channels, including mass media.[1]

Following is a discussion of where the United States stands in relation to these six objectives with special reference to progress made during the decade since Jomtien toward attainment of them.

By standards of most countries, the United States can be said to have reached the goal of universal basic education. Virtually all U.S. children and adults have completed primary school and can demonstrate competency in basic literacy and numeracy. Nevertheless, a number of qualifications must be made.

First, the definition of basic education in the United States has evolved to the point where a high school diploma is now seen as the minimal level of education required for entrance into the work force. Dropping out remains a problem at the high school level, especially among students from racial and ethnic minorities and low-income families. Thus, the United States still has some distance to go before achieving this heightened standard of basic education.

Second, it must be recalled that Jomtien did not equate education with formal schooling. While in some countries schools bear the overwhelming responsibility for delivering education, this is not the situation in the United States. Schools

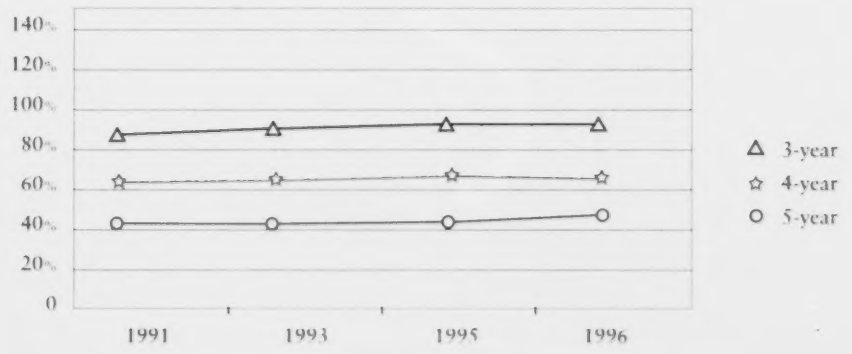
are backed up by numerous other formal institutions, from libraries and museums to zoos and nature centers, that are readily available to children in all but the most remote rural communities. Moreover, virtually every U.S. child has access to educational programs on television. These range from popular preschool programs such as *Sesame Street* to entire cable channels devoted to history and science. These educational offerings reinforce the teaching of schools in core educational areas, and they transmit valuable information on topics such as nutrition and health.

1. Expansion of early childhood care and development

Early childhood care and development takes many forms, from maternal care in the home to formal educational programs. Enrollment in the latter has increased consistently and substantially in the United States in recent decades. The National Center for Education Statistics (NCES) of the U.S. Department of Education reported that the proportion of U.S. children aged three to five who were enrolled in preprimary programs more than doubled between 1965 and 1990, and as shown in Figure 1, modest gains continued in the 1990s.[2]

Analysis by NCES of enrollment rates for three- to five-year-olds in center-based programs or kindergartens during the 1990s yields somewhat higher rates. Enrollment for three-year-olds held steady between 1991 and 1996, while the proportion of four-year-olds and five-year-olds rose.[3] One factor in the growth in preprimary enrollment in recent decades has been an increase in the number of women with young children entering the work force.

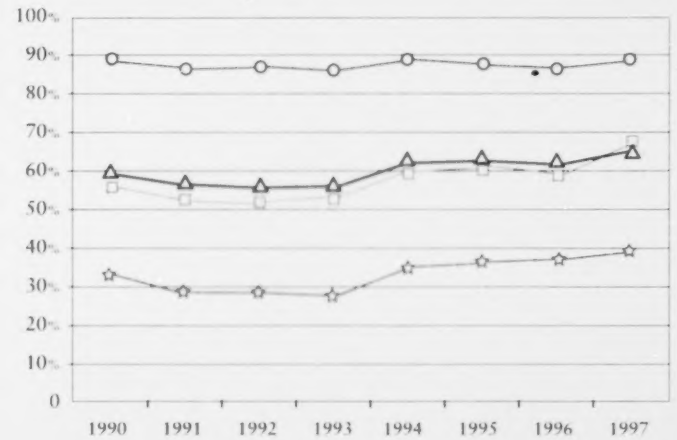
Figure 1: Percentage of 3-, 4-, 5-Year-Olds Enrolled in Center-based Programs or Kindergarten



US Department of Education, The Condition of Education 1999, p.123

By and large, three- and four-year-olds were enrolled in private programs, while the overwhelming majority of five-year-olds were in public kindergartens.[4] As is discussed later, one consequence of this heavy reliance on private resources for younger children is that center-based enrollment correlates closely with socioeconomic status.

Figure 2: Percentage of 3-, 4-, 5-Year-Old Children in Preprimary Programs



US Department of Education, NCES, 1999, Digest of Education Statistics 1998, Table 46, p. 61.
Due to new collection procedures, figures from 1994 on may not be comparable to those for previous years.

Comparison with other countries

Despite such gains, preprimary enrollment in the United States is below that of many other developed countries, especially in the years before kindergarten. In 1996, the Organization for Economic Cooperation and Development (OECD) released data on the proportion of two- to four-year-olds taking part in educational programs in 27 countries. The proportions of this age cohort enrolled in such programs ranged from about 12 percent in Korea and Switzerland to 79 percent in Belgium and New Zealand. In the United States, 34 percent of two- to four-year-olds were enrolled, well below the OECD mean of 41 percent. This figure was higher than the proportion in ten countries and lower than that in 16 others.[5]

Jomtien made a distinction between early childhood development and formal preschool education, and this distinction is relevant to the United States. An abundance of reading materials are available for parents and their preschool children. Radio and television are also important sources of information on nutrition, health, and parenting.

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Project Head Start

The major early childhood intervention program in the United States is Project Head Start, which began in 1965. This federally funded program is a comprehensive child-development initiative intended primarily for preschool children whose families fall below the poverty line. Head Start employs a "whole-child" philosophy that combines early education activities with health and nutrition services and stresses family and community participation.

In 1999, Head Start served nearly 800,000 children. Although the program enjoys widespread popular and political support, it still reaches only about half of the more than 1.6 million children estimated to be eligible.[6]

Factors that have an impact on education

The educational prospects for large numbers of U.S. children are put at risk by poverty and other factors associated with low achievement and dropping out. According to the Federal Interagency Forum on Children and Family Statistics, which is a collaborative effort of 18 federal agencies, 19 percent of children lived in families with incomes below the poverty level in 1997, a proportion that has remained relatively stable for the last two decades. The proportion of children living in extreme poverty grew slightly between 1980 and 1997, from 7 to 8 percent.

Forum data showed that the proportion of infants born with low birth weight was 8 percent in 1997, the highest figure in more than 20 years. According to UNICEF, the United States ranks 159th among 193 countries surveyed in under-five mortality rates—below virtually every other developed country.[7] On the other hand, the mortality rate for children is falling, and the proportion of poor children who receive the proper series of vaccines has grown.[8]

Early childhood interventions

Numerous researchers in the United States have documented the educational and other benefits of early childhood intervention programs. A number of reports on the effects of particular programs, usually small in scale, have found that poor children who receive good daycare from infancy on are more likely to graduate from high school, go to college, find employment, and avoid problems with the law than their peers who do not take part in such programs.

A RAND team led by Lynn Karoly and Peter Greenwood examined data on nine programs for which evaluations had been conducted. They concluded that early interventions programs targeted at disadvantaged children "can provide significant benefits" to participating children and their families. These benefits include short-

ing it possible for many students to leave school before completing basic education as defined in United States. Dropping out remains a serious problem at the secondary level, especially among racial and ethnic minorities.

Total primary and secondary enrollment

After declining during the 1970s and early 1980s as the last of the baby boomers worked their way through the educational system, total primary and secondary school enrollment in public and private schools in the United States grew steadily during the late 1980s and 1990s, reaching an all-time high of 52.7 million in 1998. The upward trend is expected to continue for the foreseeable future, with enrollment projected to increase by an additional 3 percent, to 54.3 million, by 2008.

Figure 3: Elementary and Secondary School Enrollment: Fall 1970-2008

U.S. Department of Education, NCES, 1999, Digest of Education Statistic 1998, Table 39, p. 50.

Total enrollment in institutions of higher education has also continued to grow steadily, from 10.1 million full-time-equivalent students in 1990 to 10.4 million in 1996.[12]

Enrollment as a proportion of all children

The proportion of children aged five to 17 enrolled in school has grown steadily, from 72 percent at the turn of the last century to 90 percent in 1989-90. It rose from 90.2 percent in 1989-90 to 91.7 percent in 1995-96.[13]

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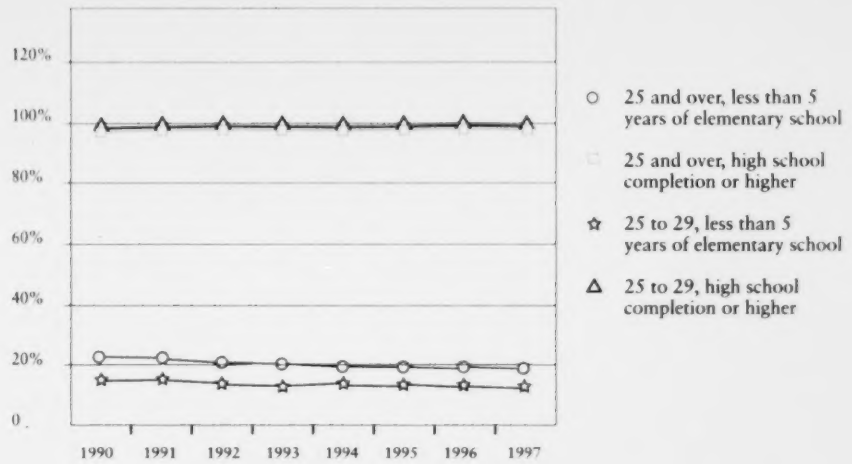
Figure 4: Proportion of U.S. Adults Who Have Completed Primary and Secondary Education



U.S. Department of Education, NCES, 1999, Digest of Education Statistic 1998, Table 8, p. 17.

Accordingly, virtually all U.S. adults now have at least a primary education. The proportion of persons aged 25 and older who had completed five years of elementary schooling rose from 97.5 percent in 1990 to 98.3 percent in 1997. Among adults aged 25-29, the proportion with five years of primary education went from 98.8 percent to 99.2 percent during the period from 1990 to 1997, and the proportion of those with a high school diploma rose from 86 to 87 percent.[14]

Increasing racial and ethnic diversity

The American school population is becoming increasingly diverse racially and ethnically. For example, the proportion of African American students in grades one to 12 rose from 19.8 percent to 25.0 percent between 1990 and 1997.[15]

Diversity is particularly notable in inner-city schools. African Americans accounted for 33 percent of students who lived in central cities and attended public schools in 1990 and 32 percent in 1996. Hispanics accounted for 20 percent of such students in 1990 and 25 percent in 1996.[16]

Since the 1970s, U.S. colleges and universities have also become increasingly diverse racially and ethnically. The proportion of minorities enrolled in higher education grew from 19.6 percent in 1990 to 25.2 percent in 1996, with most of the growth being accounted for by Hispanic and Asian/Pacific Islander students.[17]

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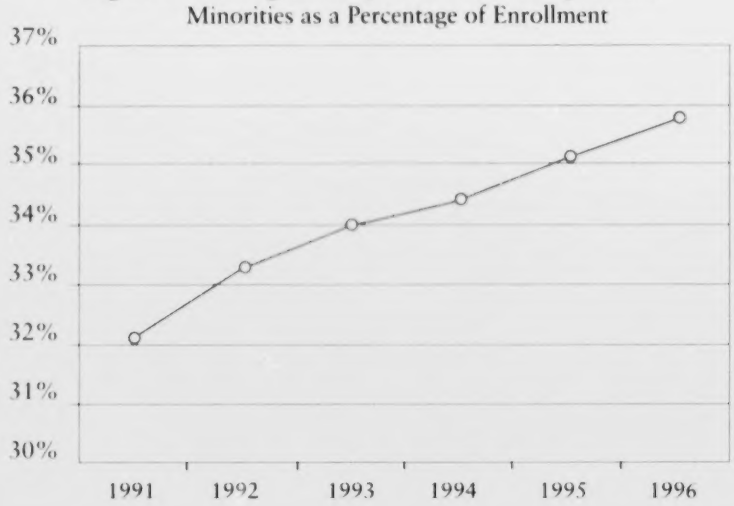
Figure 5: Growing Diversity of U.S. School Population:
Minorities as a Percentage of Enrollment



US Department of Education, Office of Educational Research and Improvement, The Condition of Education 1999, Table 46-1, p. 249

Comparison with other countries

U.S. enrollment and school completion rates compare favorably with those of other industrial countries. Data on the proportion of persons aged 25-64 who have completed upper secondary education show that the United States, with 86 percent, ranks highest among 26 industrial countries. The only other countries in which at least 80 percent of this age cohort are secondary school graduates are the Czech Republic, Germany, Norway, and Switzerland.

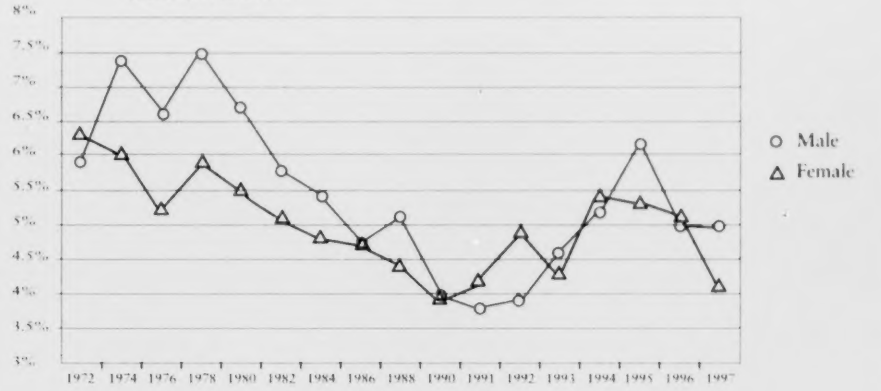
Figures on the younger 25- to 34-year-old cohort, however, suggest that other countries have gradually caught up to or surpassed the United States in high school completion. The U.S. rate of 87 percent is the same as that of Sweden, Switzerland, and the United Kingdom, and lower than that of the Czech Republic, Korea, and Norway.[18]

Dropping out at the secondary level

Although the United States has achieved universal access at the elementary level, a substantial minority of students—about one in 20—drop out of school at the middle and high school levels. These figures are a matter of concern because high school dropouts have lower earnings, experience more unemployment, and are more likely to end up needing public support, going to prison, and becoming pregnant than their peers who have a diploma. Nevertheless, long-term trends regarding dropouts in the United States are favorable.

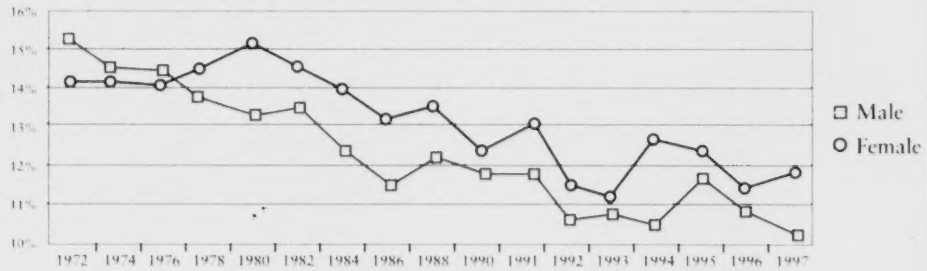
NCES defines the *event* dropout rate as the percentage of persons aged 15-24 in grades 10-12 who were enrolled in school the previous October but who were not enrolled and had not graduated in October of the current year. This rate decreased

Figure 6a: High School Event Dropout Rates for Persons 15-24 Years Old from 1972-1997



US Department of Education, Office of Educational Research and Improvement, The Condition of Education 1999, p. 136.

Figure 6b: High School Status Dropout Rates for Persons 15-24 Years Old from 1972-1997



US Department of Education, NCES, 1999, Digest of Education Statistics 1998, Table 105, p. 124.

from 6.7 percent in 1974 to 4.6 percent in 1997, and in some years, 1990 and 1991, it was as low as 4.0 percent.[19]

The *status* dropout rate describes the number of persons in a particular age cohort who lack a high school diploma. Among 16- to 24-year-olds, this rate decreased from 14.3 percent in 1974 to 11.0 percent in 1997.[20] Nevertheless, over the last

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decade, between 300,000 and 500,000 10th to 12th graders have left school each year without completing a high school program.[21]

One reason for the relatively large high school completion rate is that the United States offers a number of "second chances" for students to obtain a high school diploma, including attendance at special school-based programs and obtaining a General Education Credential (GED) credential, usually by passing a high school equivalency examination. Some critics, however, see a possible downside to this situation. In a recent report to the Annie E. Casey Foundation, Richard Kazis and Hilary Kopp note, "The earnings of GED holders tend to be lower than those of graduates with regular diplomas who do not continue postsecondary studies. In fact, some studies have even found that their earnings differ little, if at all, from those of dropouts."[22]

Enrollment of students with disabilities

Figure 7a: Number of Children 0-21 Years Old with Disabilities Served in Federally Supported Programs for the Disabled, 1975-77 to 1996-97

Year	Number served (in thousands)
1976-77	3,692
1980-81	4,142
1984-85	4,315
1985-86	4,317
1986-87	4,374
1987-88	4,446
1988-89	4,527
1989-90	4,641
1990-91	4,762
1991-92	4,949
1992-93	5,176
1993-94	5,365
1994-95	5,539
1995-96	5,745
1996-97	5,920

US Department of Education, NCES, Digest of Education Statistics 1998, Table 53, p. 66.

The United States is unusual in that, since the early 1970s, federal legislation has required local public school systems to provide all children who have disabilities with the sort of education that will enable them to develop their knowledge and skills to the fullest extent possible. Figures 7A and 7B show how, as a result of this mandate, the number of children with disabilities served in federally supported programs for the disabled has grown steadily over the past decade, as has the share such pupils represent in total enrollment.[23]

Figure 7b: Children 0-21 Years Old with Disabilities Served in Federally Supported Programs for the Disabled as a Percent of Total Enrollment, 1975-77 to 1996-97

Year	Percent Served
1976-77	8.33
1980-81	10.13
1984-85	11.00
1985-86	10.95
1986-87	11.00
1987-88	11.11
1988-89	11.26
1989-90	11.44
1990-91	11.55
1991-92	11.77
1992-93	12.08
1993-94	12.34
1994-95	12.55
1995-96	12.81
1996-97	12.98

US Department of Education, NCES, Digest of Education Statistics 1998, Table 53, p. 66.

Most of the increase in special education enrollment can be attributed to a steady increase in services for children diagnosed as having specific learning disabilities. The number of such pupils in federally supported programs grew dramatically in recent decades, from 800,000 in 1976-77 to 2.1 million in 1990-91. By 1996-97, the number had reached 2.7 million. The proportion of learning disabled students among all disabled students more than doubled, from 22 percent in 1976-77 to 45 percent in 1996-97.[24]

The legislation also provided that, whenever feasible, such children should be taught in regular classrooms. Between 1990 and 1996, the proportion of children with disabilities aged 6 to 21 who were educated in regular classrooms rose from 32 to 45 percent.[25]

Non-English-speaking students

Since the 1980s, a wave of Asian and Hispanic immigrants has transformed the demographics of U.S. primary and secondary schools. The Bureau of the Census estimated that by 1990 there were more than 2.3 million immigrant youth in U.S. schools and colleges, comprising about 5 percent of all students. Approximately 25 percent of immigrants come from countries where English is the dominant or official language, and another 20 percent come from Spanish-speaking countries.[26]

Immigration in the United States differs from that of most other industrial countries in that it is not the legacy of a colonial era. Immigrants are typically poor, and many have suffered the traumas of economic deprivation or civil strife in their native countries. Like their predecessors in earlier periods, most immigrants are concentrated in a few large cities, such as Los Angeles, Miami, and New York City, and 45 percent of immigrant students who have been in the United States for three years or less are enrolled in California schools.[27]

3. Improvement in learning achievement

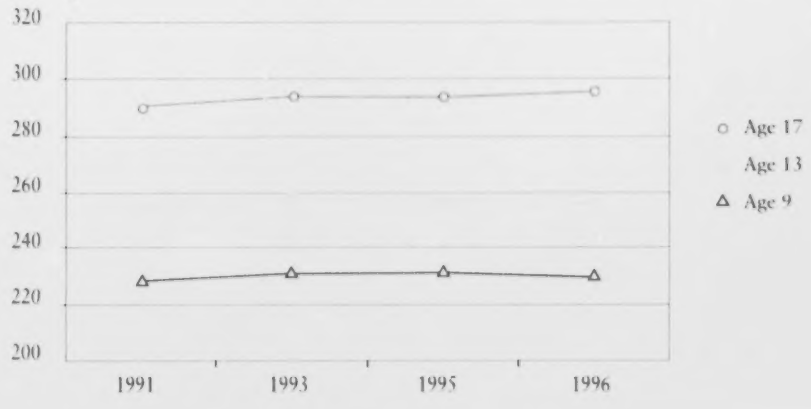
Long-term trends in student achievement in the United States are difficult to describe because relatively few "then and now" comparisons were carried out until the late 1960s. Since then, however, substantial data have become available, most notably those of the federally sponsored National Assessment of Educational Progress, or NAEP.[28]

NAEP was established in 1969 to monitor academic achievement in core academic subjects through the sampling of students aged 9, 13, and 17. For political reasons, assessment findings were restricted initially to the national level and to large subsections, such as urban vs. rural or by regions of the country. Only in 1990, with the emergence of a movement to promote standards in education, was NAEP allowed to publish scores showing how students fared in various states. The sample design still does not permit comparisons of smaller subsets, such as districts or schools, although some districts have given the tests on their own in order to make such comparisons.

Although NAEP results have become generally accepted among educators and political leaders as a reliable barometer of average pupil academic performance over time, the question of how to define an acceptable level of performance remains controversial. NAEP has developed definitions of what constitutes "basic," "proficient," and "advanced" performance in various core subjects and has released data on the proportion of students achieving at each of these levels. The NAEP definitions, however, have been criticized by many scholars on technical and other grounds.

While experts may differ about how to define adequate levels of performance, widespread agreement has emerged over the need to think about pupil performance in terms of a "range" of knowledge and skills. Levels of performance that once ensured that a pupil would qualify for a good job in the past may or may not be sufficient to make him or her competitive in the emerging information-based economy. As we shall see in a moment, it is quite possible for a country such as the United States to successfully raise average levels of achievement while doing little to increase the number or proportion of students achieving at more sophisticated levels.

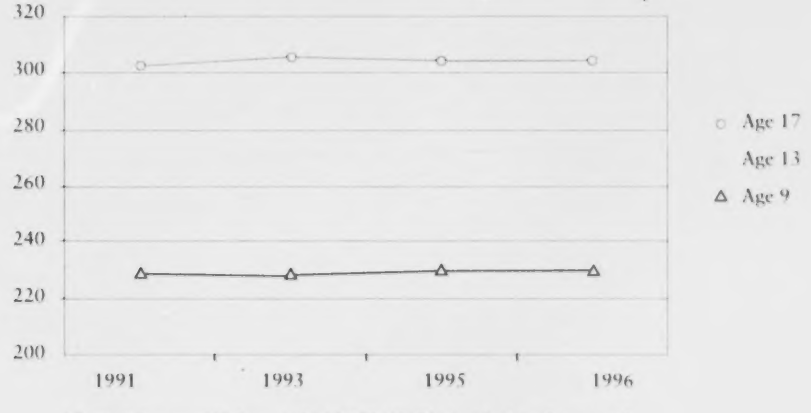
Figure 8a: Trends in Average Scale Scores for the Nation in Science



J. R. Cambell, et at., 1998, Report in Brief, NAEP 1996 Trends in Academic Progress, p. 5.

One might expect to see a decline in overall achievement as access rates approach universal status. Such a decline did in fact occur during the 1960s and 1970s in average scores on the SAT, a college admissions test. Since the Scholastic Achievement Test (SAT) is taken only by college-bound students, however, patterns

Figure 8b: Trends in Average Scale Scores for the Nation in Mathematics



J. R. Cambell, et at., 1998, Report in Brief, NAEP 1996 Trends in Academic Progress, p. 5.

in scores on these examinations do not accurately reflect overall achievement trends. In general, trends in student achievement in the United States over recent decades as described by NAEP present a mixed picture.

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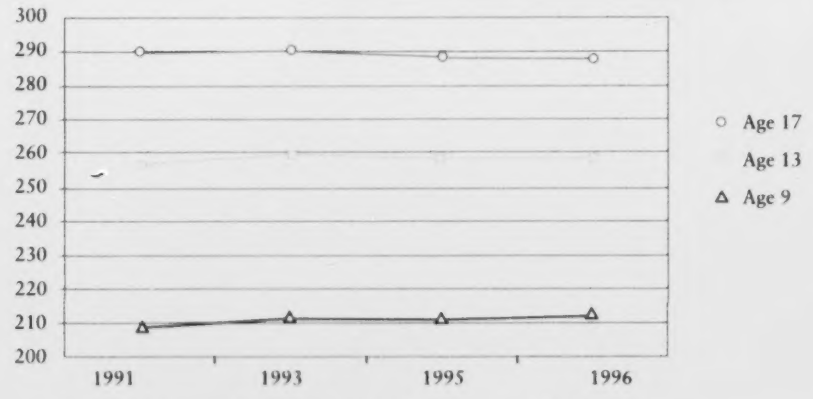
Figure 8c: Trends in Average Scale Scores for the Nation in Reading

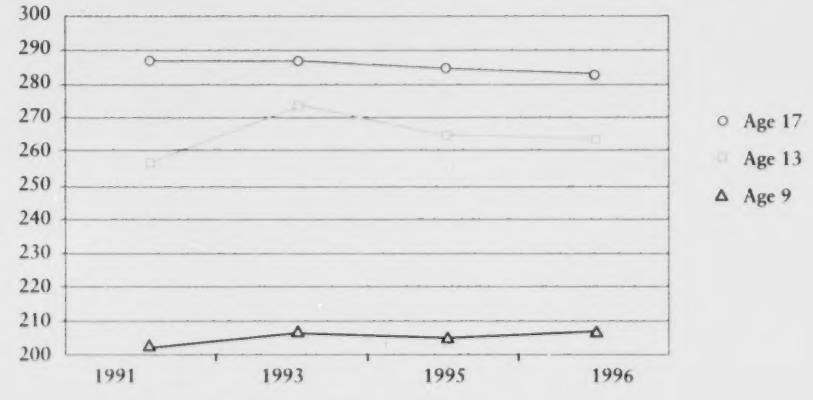


J. R. Cambell, et at., 1998, Report in Brief, NAEP 1996 Trends in Academic Progress, p. 5.

Trends in student achievement

Overall NAEP trends since 1970 show declines or relative stability in math and science in the early 1970s, followed by improvements thereafter. Results in reading and writing are mixed.

Figure 8d: Trends in Average Scale Scores for the Nation in Writing



J. R. Cambell, et at., 1998, Report in Brief, NAEP 1996 Trends in Academic Progress, p. 5.

Science–The long-term pattern is one of early declines followed by improvement. Among 17-year-olds, for example, the average score on scale of 0 to 500 dropped from 305 in 1970 to 283 in 1982. The average was back up to 290 by 1990 and 296 in 1996—still below the 1970 figure. The 1996 scores for 9- and 13-year- olds are slightly above those from 1970. Seventeen-year-olds improved noticeably between 1990 and 1996, from 290 to 296, while the scores of 9- and 13-year-olds increased slightly.[29]

Mathematics–The long-term trends show overall improvement. The 1996 scores of all three age groups were above those for 1970. During the 1990s, scores of 17-year-olds rose from 305 to 307, those of 13-year-olds from 270 to 274, and those of 9-year-olds from 230 to 231.[30]

Reading–Scores increased in the 1970s and 1980s, but the increases were not sustained in the 1990s, when the scores of 17-year-olds actually fell from 290 in 1990 to 287 in 1996, while those of 9- and 13-year-olds both rose by a percentage point. Nevertheless, all three ages were above 1970 levels.[31] Gains for nine-year-olds are seen as the result of better performance by lowest achievers.[32]

Writing–The overall pattern is one of declining long-term performance. Between 1970 and 1996, the scores of 11th grade students fell from 290 to 283, while those of 8th grade pupils dropped from 267 to 264. The scores of 11th grade students fell during the 1990s, while those of 8th grade students increased. Grade 4 students were the only ones to show long-term increases, from 204 to 207 between 1970 and 1996.[33]

Performance on international comparisons

While it is not clear from NAEP data whether U.S. students are performing better or worse than in the past, a strong case can be made that current students do not perform as well as many of their international counterparts.

The *Third International Mathematics and Science Study* (TIMSS) was the most ambitious comparative study ever conducted. An international team of researchers carried out simultaneous cross-sectional studies for three student populations (roughly grade 4, grade 8, and students in final year of secondary school) and assessed nearly half a million students in 41 countries. TIMSS results, reported in 1995, showed that U.S. students do relatively well in grade 4, where they scored above the 26-nation international average in math and were second only to Korea in science. U.S. 8th graders, however, were below the 41-nation international average in math and only somewhat higher than the international average in science. By grade 12, U.S. students were performing below the international average in both subjects and were among the lowest of the 21 countries, mostly industrialized, that tested students at this grade level.[34]

The *1991 IEA Reading Literacy Study* assessed the reading literacy of 4th and 9th grade pupils in 31 countries and looked at performance in the narrative, expository, and documents domains. Overall performance of U.S. students was encouraging. American 4th graders outperformed students in all countries except Finland. Among 9th graders, Finland had the top score, and United States was closely grouped with 15 other nations near the top.[35]

The National Center for Education Statistics constructed a "world average" of 18 countries that are members of Organization for Economic Cooperation and Development (OECD) and that participated in the IEA reading study. Against this average, U.S. students performed well. Among 4th graders, 60 percent of U.S. students exceeded the OECD average in the narrative and expository domains, and 70 percent in documents. The comparative advantage of the United States was not as great among 9th graders, where 52 to 55 percent of U.S. students meet or exceed the OECD average.[36]

Results of the IEA international comparisons present a somewhat more optimistic picture than the National Assessment of Education Progress (NAEP) of the reading levels of U.S. students. Scholars have attempted to explain the differences by noting that the two assessments measure different aspects of reading. IEA mainly asks students to recognize details and to make simple inferences and literal interpretations; NAEP requires students to do all these, but also to identify themes, detect the author's point of view, make larger inferences, support their opinions with citations from the text, and write summaries of the reading selections on the test.[37]

4. Reduction of adult illiteracy rate, especially gender disparities

National education systems are judged not only by the proportions of students who complete specified levels of education but also on the extent to which graduates possess the literacy, numeracy, and other skills necessary to function as workers, citizens, and family members. Because of the growing importance of such skills in the emerging information society, industrial nations mounted a number of efforts in the 1990s aimed at identifying and understanding patterns of adult literacy.

The International Adult Literacy Survey (IALS), initiated in 1994 by seven governments and three intergovernmental organizations, tested large samples of adults in 12 industrial countries. It examined three types of literacy—prose, document, and quantitative—and measured skills ranging from finding information in a simple text to understanding and using printed materials at home and work. Scores were reported at five levels, with level 3 generally considered the desirable level for individuals to be able to cope in a modern democratic society. At least a quarter of adults in all countries tested performed below the desirable level.[38]

Results showed that the United States compares well with other countries but that its pattern is somewhat polarized. Approximately one-fifth of U.S. adults scored at or above level 4 on all three scales, a figure surpassed only by Sweden. However, the United States also had a disproportionate number of adults scoring at level 1. Only Poland had a greater percentage of adults scoring at this lowest literacy level. Sweden, Germany, and the Netherlands all had significantly smaller proportions of adults scoring at this low level than the United States.[39] Subsequent detailed

analysis of the IALS data showed a strong correlation in the United States between parental education and the literacy levels of youth. The performance gap between youth with the least and most parental education in the United States was the equivalent of 15 years of additional schooling.[40]

IALS found the United States is unique in two respects. It is the only country in which men do not outscore women on the document scale,[41] and is also the only country in which adults aged 46 to 55 outscore young people aged 16 to 25.[42] IALS data showed that literacy proficiency has an independent and substantial effect on income in all countries, and that, except for Ireland, this wage premium is larger in the United States than in any of the other participating countries.[43]

5. Expansion of basic education and training in other essential skills

Countries differ in their approach to organizing the transition from school to work. In some, such as Germany and Switzerland, work-study programs are common, while in others, including Belgium and Spain, education and work are rarely associated. As described below, the United States has pursued a middle path in which many students work, though not necessarily in jobs that will lead to permanent employment.[44]

U.S. high schools have traditionally offered three types of academic programs: college preparatory, general, and vocational. In recent years, enrollment in vocational programs has declined compared with the other two categories. Between 1982 and 1992, the proportion of high school seniors who reported being in vocational programs fell from 27 to 12 percent, while the proportion for college preparatory rose from 38 to 43 percent and that for general programs from 35 to 45 percent.[45] Declines in taking the vocational course were evident throughout the vocational curriculum, with the number of credits earned in general labor market preparation, consumer and homemaking education, and occupationally specific education curricula all declining between 1982 and 1992. The composition of course taking within a specific vocational curriculum also shifted away from courses that were part of an organized sequence and toward specialty courses within various fields. NCES interpreted this shift as suggesting that "participation in vocational education at the secondary level may be increasingly diffuse."[46]

Enrollment in vocational tracks varies widely by race and family income. In 1992, 11 percent of white students reported being in such a program, compared with 15 percent of African Americans and 13 percent of Hispanics. Twenty-one percent of students from the low socioeconomic group families were in vocational programs, but only 3 percent of students in the highest quartile and 13 percent of those in the middle two quartiles.[47]

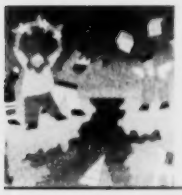
As noted above, preparation for the work force in the United States is by no means limited to formal public schooling. Young people have a broad range of other options at their disposal, including private schools that offer credentials in technical and vocational fields and extensive training programs run by employers.

6. Increased acquisition of knowledge, skills, and values for better living

Schools in the United States have never viewed their mission as limited to the teaching of core academic or vocational subjects. The country's system of free "common schools" was created in the 19th century not only to produce workers for the emerging industrial economy but to create informed citizens who would share democratic and other values, and the teaching of civics was an important function. From the outset subjects such as home economics, woodworking, physical education, and typing have had a place in school curricula alongside reading, writing and mathematics. Public schools have frequently been enlisted to help deal with social problems, and most secondary schools are involved in activities ranging from preparing students to get their driver's license to drug education programs.

As with preparation for the workforce, young people in the United States are exposed to numerous sources of information outside of school related to practical living. Television, radio, films, and other electronic media are powerful forces in conveying information about topics ranging from health and physical fitness to tips on how to manage personal finances. Within the last two years young people have become adept at using the Internet as a tool to obtain information on everything from the lowest price for a popular CD to information about various colleges and universities.

One important trend in the 1990s has been an increase in the number of students who volunteer time for community service, such as tutoring disadvantaged pupils or visiting in retirement homes. Some high schools have made such service a graduation requirement, while many more have organized volunteer opportunities for students as a way of developing positive civic, social and personal values. The term "service learning" has emerged to describe programs that build community service into the school curriculum, thus combining active engagement in meeting social needs with academic reflection on the experience. A University of Minnesota study estimated that the proportion of U.S. high school students participating in service learning projects rose from 2 percent in 1984 to nearly 25 percent in 1997.



EXPERIENCES IN THE UNITED STATES RELATED TO EDUCATION FOR ALL

The 1990s were a time of enormous vibrancy and change for education in the United States. A number of important trends emerged or became more visible and well-defined during the decade. Education secured its position as the major domestic political issue of the day, and policy makers found themselves engaged in major policy debates over topics ranging from curriculum content and computers in the classroom to vouchers and other new educational delivery systems.

The educational experiences of American educators, political leaders, academics, parents, and others during the 1990s obviously reflect the particular culture, history, and educational system of the United States. Many of these experiences, however, are related, directly or indirectly, to the struggle to realize Education for All in other countries, developed and developing alike. The following section considers some of these experiences.

1. Standards-based reform and the pursuit of quality

In September 1989, President George Bush convened the governors of the 50 U.S. states in Charlottesville, Virginia, for an Education Summit aimed at defining a set of "national goals" for primary and secondary education in the United States. Six months later, the World Conference on Education for All took place in Jomtien, Thailand with the aim of rallying the nations of the world in pursuit of universal basic education.

The two events had quite different agendas and involved quite different casts, but the fact that they occurred virtually simultaneously was by no means coincidental. Both gatherings reflected the growing recognition among national educational and political leaders at the time that the laying out of explicit expectations is central to school improvement. Both produced a specific set of educational goals to be achieved by the year 2000.

The Charlottesville Summit drafted a set of national goals for American schools and established a National Education Goals Panel to monitor progress toward them. The goals ranged from student achievement targets to the aspiration that every U.S. school will be "free of drugs, violence and the unauthorized presence of firearms and alcohol." Most were highly ambitious, including the goal that U.S. students would be "first in the world in mathematics and science achievement."

The National Education Goals

Goal 1: Ready to Learn. By the year 2000, all children will start school ready to learn.

Goal 2: School Completion. By the year 2000, the high school graduation rate will increase to at least 90 percent.

Goal 3: Student Achievement and Citizenship. By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.

Goal 4: Teacher Education and Professional Development. By the year 2000, the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.

Goal 5: Mathematics and Science. By the year 2000, United States students will be the first in the world in mathematics and science achievement.

Goal 6: Adult Literacy and Lifelong Learning. By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

Goal 7: Safe, Disciplined, and Alcohol- and Drug-Free Schools. By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.

Goal 8: Parental Participation. By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

Source: National Education Goals Panel, http://www.ngep.gov/page3.htm

Progress toward the goals has been mixed at best. The country is closer to the goal that "all children in America will start school ready to learn," in part because more two-year-olds are being immunized against preventable childhood diseases, and more parents are now reading to their children. On the other hand, the overall high school completion rate is no higher than it was in 1990. As noted above, U.S. 4th graders do fairly well in mathematics and science, but by the time they graduate

from high school, U.S. students are nowhere near being "first in the world" in either subject.[48]

Even though none of the National Goals for Education has been met, the very process of achieving consensus around a set of objectives turned out have a profound impact on United States education. The Charlottesville Summit gave visibility and credibility to the benefits of setting ambitious goals, and it helped set the stage for the "standards-based" reform movement that was to become the defining educational movement of the 1990s in the United States.

The U.S. concept of academic "standards" is unusual. Most countries have national curricula and even national examinations, and there is little doubt in most people's minds about what students should know and be able to do as they move up the educational ladder. In the United States, however, education is managed at the state and local levels, and expectations about what students should learn and how well they should learn it vary widely across the country. Thus, the very concept of designing and agreeing on a set of learning outcomes across traditional jurisdictional lines is new and, in the minds of many, unsettling and undesirable.

Academic standards in the United States also differ in another important respect. Whereas the national education systems in most countries focus almost entirely on cognitive outcomes, U.S. political and educational leaders tend to speak about what students need to "know and be able to do." Thus considerable attention is paid to skills such as reading, writing, and calculating as well as to cognitive knowledge.

The growing emphasis on standards in the United States can be thought of in two ways. In the broadest sense, it reflects the growing focus on educational quality. As in other nations, there is a growing recognition in the United States that issues of access cannot be separated from concerns about the quality of the teaching and learning to which students are gaining access. Standards legitimize the setting of explicit objectives toward which students, teachers, and whole schools can strive. They embody goals that are not only ambitious, but gain credibility by the fact that they reflect a broad consensus.

Given the fact that the United States has a relatively decentralized educational system, it comes as no surprise that standards have emerged as much from the bottom up as from the top down. The locus of most standards-setting initiatives has been the individual states, which have borrowed widely from each other, rather than the federal government. To be sure, it can be argued that standards in particular subject areas reflect a "national" consensus among educational professionals. The most obvious example of this is the set of mathematics standards first put forward in the early 1990s by the National Council of Teachers of Mathematics. Officials of the U.S. Department of Education, as well as presidents Bush and Clinton, have applauded the emergence of standards at the state level and in the

various subject areas, but they understand that any suggestion that these were being imposed by Washington would unleash a political backlash.

In a narrow sense, the concept of standards has become the basis for a particular approach to school improvement. "Standards-based reform" uses a strategy of coordinating goals, instruction, and assessment. Goals are set by the state or other educational authority, and teachers and school administrators are expected to devise appropriate methods for attaining these goals. Students and educators alike are then held accountable for doing so. To make the system work, states have gone to elaborate lengths to "align" the content of textbooks, instructional manuals, and assessment devices.

The accountability provisions of standards-based reform in the United States are for the most part enforced by testing. The United States has always relied more on standardized, especially multiple-choice, tests than other industrial countries, and such reliance has intensified in recent years. The need to measure student achievement against standards has led to the development of highly sophisticated new "value-added" testing techniques. In North Carolina, for example, every primary and secondary student is tested in each core academic subject each year, and the results are compared with those of the previous year. Schools are then graded not by average tests scores but by aggregated data on how much they have enhanced the learning of each of their students. In many districts, test scores are used as a basis for "school report cards" that are published in local newspapers. State or city takeovers of "failing schools" are also becoming increasingly common.

Within the last year a number of cities and states have retreated somewhat from setting high standards and enforcing them with "high stakes" tests. School officials in Los Angeles, for example, relaxed a policy that would have required students to repeat certain grades if they failed to pass end-of-year tests. The officials calculated that as many as half of the district's more than 700,000 students would be retained. Arizona, Massachusetts, and Virginia are also re-examining such policies.

The emergence of standards-based reform reflects a number of significant educational trends. Chief among them is the shift from the traditional focus on inputs to a concern for outcomes. The standards-based approach to school reform begins by looking at the goals that policy makers seek to accomplish and then works backward to design ways of reaching these goals. The emphasis on new forms of assessments can be seen as a function of the need to measure progress toward the new and more explicit goals of education, but it also works the other way. Growing dissatisfaction with the shortcomings of multiple-choice tests contributed in a major way to public acceptance of the need for explicit standards. Finally, as already noted, standards-based reform represents an affirmation of the notion that, in and of itself, enhanced access is of little value. Only quality education is worth fighting for.

The standards movement has produced a number of important spin-off effects:

More rigorous courses. Secondary education in the United States is unusual in that students typically have considerable latitude in selecting which subjects they study and at what level of difficulty. A number of studies have shown that, in recent years, U.S. high school students are opting for more rigorous academic courses than they did in the past. One indication of this trend is student interest in the Advanced Placement (AP) courses offered by the College Board. These are college-level courses offered in high schools, and students who do well on the examinations at the end of each course can qualify for college credits. As shown in Figure 9, enrollment in AP courses and the taking of such exams essentially doubled between 1991 and 1999.[49]

NAEP data confirm the trend toward more rigorous courses. For example, 17-year-olds in 1996 were more likely than those in 1986 to report having taken biology and chemistry, although there was no change in the percentage taking physics. Thirteen-year-olds in 1996 were taking more pre-algebra and less regular math.[50]

Figure 9: Growth of Advanced Placement Courses and Exams

Year	# of Candidates	# of Exams Given	# of Courses Offered
1990-91	359,120	535,186	15
1991-92	388,142	580,143	15
1992-93	424,192	639,385	15
1993-94	458,945	701,108	16
1994-95	504,823	785,712	16
1995-96	537,428	843,423	16
1996-97	581,554	921,601	16
1997-98	635,168	1,016,657	18
1998-99	704,298	1,149,515	19

College Board, Advanced Placement Office, 1999.

Standards for teachers. Concern about standards for students has led to greater discussion of standards for teachers. In 1996, the National Commission on Teaching & America's Future issued a scathing indictment of the country's systems for training and inducting new teachers and for continuing professional development of those already in classrooms.

For the last 12 years, the National Board for Professional Teaching Standards, which operates with private, foundation, and federal funds, has been working to build a system of voluntary national certification for outstanding teachers. The project has developed professional standards for teaching various subjects at vari-

ous grade levels. Teachers seeking "board certification" in their specialty must clear a number of hurdles, from subject matter tests to evaluation of classroom performances. Nearly 2,000 U.S. teachers have already been certified, and the goal is to increase that number to 100,000 by 2006.[51]

The "new basics." It is not surprising that emphasis on academic standards that has dominated U.S. educational debate for the last decade has produced heated discussions about curricular content and the push for a broader definition of educational quality.

Everyone agrees that a rich basic education is necessary to be a functioning worker, citizen, and family member in today's society. As Wadi D. Haddad put it in a recent paper, "To be deprived of basic education is to be deprived of the essential tools for modern living. Without the skills to participate in a literate, technological world and the knowledge to transform their environment, people will remain on the margins of society, and society itself will lose their potential contributions."[52] Virtually everyone also agrees that providing an adequate basic education means raising both floors and ceilings. Knowledge and skills previously obtained by a portion of students have now become minimal requirements for all students, and learning goals for superior students are now more complex and sophisticated than ever before.

Much of the debate over content focuses on the relevance of traditional curricula. Many educators argue that content that was suitable for an industrial age is no longer adequate for today's information society. Whereas schools used to be able to equip students with the knowledge and skills that would serve them for a working lifetime, this is no longer possible in a workplace characterized by continuous change in a competitive global environment. Robert W. Galvin, chairman of Motorola, wrote that at his company "the most critical skill required by the workforce is an ability to learn and keep learning."[53]

Economists Richard Murnane and Frank Levy argue that the new basics include both hard and soft skills. Hard skills are "basic mathematics, problem-solving and reading abilities at levels much higher than many high school graduates now attain." Soft skills include "the ability to work in groups and to make effective oral and written presentations" as well as "the ability to use personal computers to carry out simple tasks like word processing."[54]

A certain tension exists between proponents of "new basics" and the standards movement narrowly conceived. Critics of standards-based reform argue that, in seeking to raise student achievement in core academic subjects as measured by the new assessments, teachers and school administrators have narrowed the curriculum at the expense of artistic, affective, and other "non-core" subjects. Ways must be found, they argue, to teach and assess a wider range of outcomes.

Openness to international comparisons. Another side effect of the standards movement in the United States has been greater attention to educational achievement levels in other countries.

Although the United States has traditionally taken part in the major international comparative studies of student achievement, the results have tended to attract little attention domestically. As the standards movement gained strength in the early 1990s, however, educational and political leaders at the state, district, and even school levels began to show greater interest in how other countries defined academic quality and how U.S. students fared in relation to their peers in other nations.

The Third International Mathematics and Science Survey represented something of a watershed in this regard. Not only did U.S. educators play a leading role in designing and carrying out the study, but the results, which showed U.S. high school students lagging behind those in other industrial countries, attracted widespread attention in the news media and in educational circles.

In another growing sign of interest in educational developments around the world, the Council on Basic Education has taken the lead on a major international effort using student work to illustrate teaching practices in nine nations, assist countries in benchmarking their own teaching against that of other countries, and share effective teaching techniques across national borders.

Consciousness is thus growing among U.S. educators that, in the words of Haddad, "education institutions cannot be treated anymore as protected industries." Educational outcomes must now meet not only national but international standards.[55]

2. The struggle for equity

Despite relatively strong overall numbers on the six target dimensions, the U.S. educational system is still characterized by continuing, and in some cases growing, disparities among various subsets of students in the distribution of educational resources and in student persistence and achievement.

As in virtually every other country, academic achievement in the United States correlates closely with socioeconomic status. Other inequities relate to the racial and ethnic background of students, gender, geography, mother tongue, and immigrant status. Equitable funding of primary and secondary education is also an issue.

The struggle to make the provision of basic education in the United States more equitable has been an important domestic political issue since the civil rights and anti-poverty movements of the 1960s, and it was reinforced by a school finance

reform movement that emerged in the early 1970s. Likewise, the standards-based reform movement of the 1990s has highlighted and given new urgency to the problems of students who are not being well served by the current education system and are thus at risk of failing to meet new, higher standards in the future.

Rather than rely on a "trickle-down" approach to reducing inequity, political and educational leaders in the United States have adopted a strategy of targeting specific groups of students and mounting programs tailored to their needs. Through Title I of the Elementary and Secondary Education Act the federal government channels nearly $8 billion annually into programs aimed at economically disadvantaged children. Hundreds of districts have created specialized "magnet" schools as a way to cut down on racial segregation in their schools. Numerous federal and state programs have been mounted for disabled students, and programs are frequently organized for purposes such as increasing the performance of girls in math and science. Practitioners and researchers vigorously debate which targeted programs are effective with particular groups of students and which are not.

Following is a discussion of some of the equity concerns related to basic education in the United States.

Socioeconomic status

Researchers in virtually all countries have identified strong correlations between various educational outcomes and socioeconomic status (SES) as measured by factors such as family income and parental education. The United States is no exception, and inequities can be observed in three important areas:

Preprimary enrollment. As parents' educational attainment increases, so do the preprimary enrollment rates of their three- and four-year-old children. Among three-year-olds, for example, 35 percent of those whose parents had only a high school diploma or took the General Educational Development (GED) high school equivalency exam were enrolled in 1996, compared with 62 percent of those whose parents had a bachelor's degree. For four-year-olds, the comparable figures were 54 percent and 70 percent. By the time children reach kindergarten age, however, the gaps disappear. Ninety-three percent of five-year-olds whose parents had only a high school education were enrolled, compared with 94 percent for those whose parents had bachelor's degrees.[56]

As shown in Table 1, the National Center for Education Statistics (NCES) also reports that three- and four-year-olds from families with annual incomes of more than $50,000 were more likely than those from families with incomes below that figure to be enrolled in preprimary programs.[57] For five-year-olds the gaps are much narrower, with 96 percent of children from families with incomes above $50,000 enrolled compared with a rate of 91 to 92 percent for children from families in lower categories.[58]

Persistence in school. Data on the extent to which students drop out of school before receiving a high school diploma also correlate with measures of family income and parental education. In 1997, students in grades 10 to 12 from low-

Table 1: Preprimary Enrollment by Socio-Economic Status

Household Income	3-year-olds				4-year-olds				5-year-olds			
	1991	1993	1995	1996	1991	1993	1995	1996	1991	1993	1995	1996
$10,000 or less	--	35.3	31.7	30.5	--	56.8	61.5	58.7	--	91.1	94.5	91.4
10,001-20,000	--	27.3	31.6	40.1	--	54.7	57.0	57.0	--	89.8	90.7	90.4
20,001-35,000	--	30.6	32.7	34.9	--	54.9	52.9	55.4	--	86.3	92.2	91.3
35,001-50,000	--	46.5	40.7	47.4	--	68.6	63.5	65.8	--	92.7	89.1	91.6
50,001 or more	--	64.6	62.1	60.3	--	82.4	84.5	80.9	--	97.1	97.3	95.2
Parents' Education												
Less than high school diploma	23.3	16.1	19.9	27.1	37.6	46.5	44.9	54.6	86.9	79.6	93.8	87.7
H.S. diploma or GED	32.5	29.3	29.3	34.8	51.9	51.5	56.7	54.2	87.8	89.3	91.7	92.6
Some college/tech./ vocational	44.5	42.9	40.6	42.0	64.1	68.6	65.6	66.5	91.3	92.6	92.3	91.5
Bachelor's degree	53.8	52.9	55.1	55.2	77.0	74.8	76.6	70.1	91.3	95.7	96.2	94.3
Graduate/professional school	66.1	66.4	62.6	62.1	81.1	80.1	83.3	83.3	92.4	96.0	94.8	94.7

U.S. Department of Education, NCES, The Condition of Education 1999, p. 122.

income families dropped out at an annual rate of 12.3 percent. The comparable figures were 4.1 percent for pupils in middle-income families and 1.8 percent for those in families with high incomes. The long-term trends for all three income categories, however, show somewhat decreasing event dropout rates.[59]

In 1997, students whose parents did not complete high school dropped out at a rate of 12 percent, whereas the rate for those with parents who have a bachelor's degree was only 3 percent.[60]

Achievement. The National Assessment of Educational Progress does not report data on the family income of test takers. Beginning with the Coleman Report in the mid-1960s, however, numerous studies have shown a correlation between SES and student achievement in the United States.[61] The argument is that students with home backgrounds that deprive them of economic, social, and health "capital" arrive at school less ready to learn than their more privileged peers.

The 1990s brought some indications of achievement gains among students in high-poverty schools, defined as those in which at least 75 percent of students come from low-income homes. Such evidence comes from studies of the effects of Title I, the largest federal education program aimed at disadvantaged students. Title I was re-authorized in 1994, and new policies were adopted linking the program to

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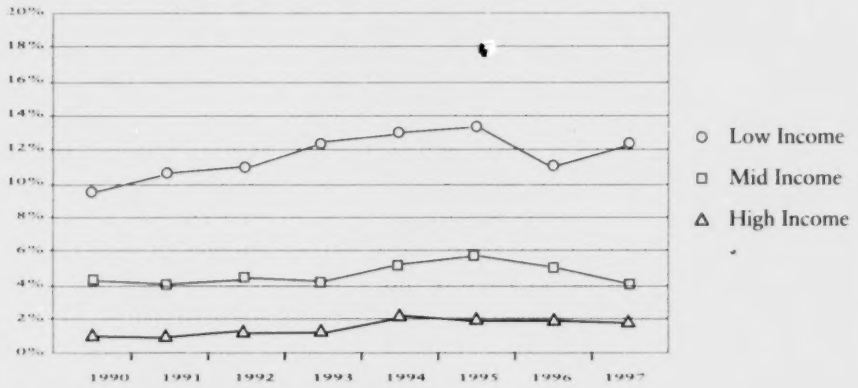
Figure 10: Event Dropout Rates, Ages 15-24, October 1972-1997
by Family Income



U.S. Department of Education, NCES, 1999, Digest of Education 1998, p. 123

standards-driven reform. Since re-authorization, the National Assessment of Title I has examined trends in performance of students in highest-poverty public schools and the progress of the lowest-achieving students generally, and researchers have found "positive gains in reading and math performance."[62] Specific findings include the following:

Reading–Since 1992, national reading trend results have improved by eight points, or nearly one grade level, for nine-year-olds in the highest-poverty public schools. This improvement, which regained ground lost in the late 1980s, was caused primarily by gains among the lowest-achieving students.[63]

Math–Performance of nine-year-olds has improved by nine points, or nearly one grade level, especially among students in the highest-poverty schools. Once again, substantial gains among lowest achievers generally was seen as the cause of the overall gains.[64]

Nevertheless, large performance gaps continue to exist between the highest-poverty and other schools. According to the National Assessment of Title I report, "While the performance of students in high-poverty schools is improving, they remain much further behind their peers in meeting basic standards of performance in both reading and math. In 1998, the percent of fourth-grade students in the highest-poverty public schools who met or exceeded the NAEP Basic level in reading was about half the national rate, and progress in reading overall is only back to 1998 and 1990 levels. For math, the percent of students in the highest-poverty schools scoring at or above the Basic level was two-thirds that of the national average."[65]

Race and ethnicity

Considerable progress has been made in the United States in recent decades in narrowing traditional gaps in educational attainment and achievement among the major racial and ethnic groups, and further progress was made in the 1990s. The recent report by the National Research Council declared, "A major accomplishment has been the near parity reached between black and white Americans in educational attainment at the high school level."[66] Nevertheless, some inequities remain, especially among Hispanic Americans.

Preprimary enrollment. Similar percentages of white and African-American three- and four-year-olds are enrolled in center-based programs; indeed, African Americans are enrolled at slightly higher rates than whites. In 1996, the rates for three-year-olds were 50 percent for African Americans and 45 percent for whites, while the rates for four-year-olds were 79 and 65 percent, respectively. Among five-year-olds, 96 percent of African Americans and 92 percent of whites are enrolled in center-based programs or kindergartens.

The picture for Hispanics is less positive. Among this group, only 28 percent of three-year-olds and 49 percent of four-year-olds were enrolled in 1996, and the latter figure is three percentage points lower than it was in 1991. Participation of Hispanic five-year-olds grew from 86 to 90 percent between 1991 and 1996 and is thus comparable to white enrollment.[67]

Persistence in school. Considerable progress has been made in achieving universal access to primary and secondary schooling across racial and ethnic lines. In 1920, 55 percent of African Americans aged 25-29 had five years of elementary education, compared with 87 percent of whites. Only 6 percent of African Americans had four years of high school or more, compared with 22 percent of whites.[68] By 1980, however, near parity had been achieved at the elementary education level

Table 2: Preprimary Enrollment by Race and Ethnicity

Race ethnicity	3-year-olds				4-year-olds				5-year-olds			
	1991	1993	1995	1996	1991	1993	1995	1996	1991	1993	1995	1996
White	44.8	40.8	44.0	44.6	61.4	63.6	65.8	65.3	89.5	90.7	92.6	91.8
Black	45.4	47.1	44.6	49.8	71.7	68.5	72.9	79.3	94.0	93.2	94.5	95.5
Hispanic	24.9	32.8	22.4	28.4	51.5	50.7	50.1	48.8	86.2	90.7	93.2	90.1
Other	43.8	35.7	32.9	39.5	62.3	72.6	71.6	51.0	90.6	90.2	98.4	95.6

Note: Interpret data in "Other" column with caution; standard errors are large due to small sample sizes.

U.S. Department of Education, NCES, The Condition of Education 1999, p. 122.

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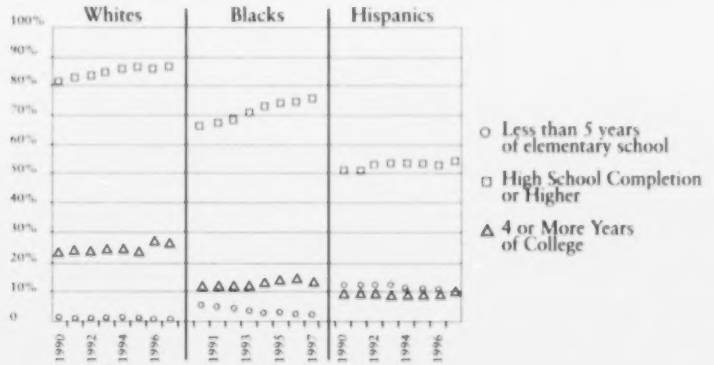
between African Americans and whites, with 100 percent of whites and 99 percent of African Americans in 1997 having five years of elementary school. Progress was also made at the high school level. Between 1990 and 1997, the proportion of whites completing high school rose from 90 to 93 percent, while the corresponding rate among African Americans went from 82 to 87 percent.[69]

Among Hispanics, however, the trends are not as favorable. The proportion of Hispanics with five years of elementary school rose from 93 to 96 percent between 1990 and 1997, while the proportion with a high school diploma increased from 58 to 62 percent–both figures well below those of blacks and whites.[70]

To the extent that dropping out remains a problem, rates correlate powerfully with race and ethnicity. In 1997, the event dropout rate was 3.6 percent for whites, 5.0 percent for African Americans, and 9.5 percent for Hispanics. The same year, the overall status dropout rate was 7.6 percent for whites, 13.4 percent for African Americans, and 25.3 percent for Hispanics.[71]

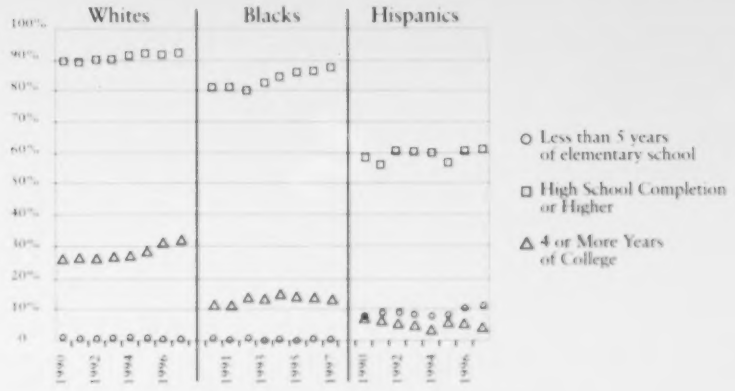
Figure 11a: Persistence in School by Race and Ethnicity: 25 Years Old and Over



U. S. Department of Education, NCES, 1999, Digest of Education Statistics 1998, Table 8, p. 17.

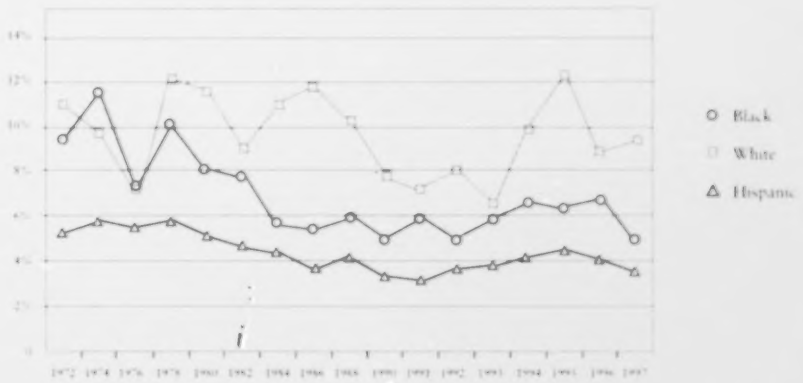
Achievement. Virtually all measures of academic achievement have shown substantial differences in the performance of African-American and white students in the United States, and these performance differentials have been a source of constant analysis and discussion. The issue was recently summarized by two scholars, Christopher Jencks and Meredith Phillips, in an important book on the subject. They wrote: "African Americans currently score lower than European Americans on vocabulary, reading, and mathematics tests, as well as on tests that claim to measure scholastic aptitude and intelligence. This gap appears before children enter kindergarten, and it persists into adulthood. It has narrowed since 1970, but

Figure 11b: Persistence in School by Race and Ethnicity: 25-29 years old



U. S. Department of Education, NCES, 1999, Digest of Education Statistics 1998, Table 8, p. 17

Figure 12: Event Dropout Rates, Ages 15-24, October 1972-1997, by Race and Ethnicity



U. S. Department of Education, The Condition of Education 1999, p. 122

the typical American black still scores below 75 percent of American whites on most standardized tests. On some tests the typical American black scores below more than 85 percent of whites."[72] Black-white achievement differentials persist even when the data are controlled for measures of socioeconomic status.

Data from the National Assessment of Educational Progress show that the performance of African-American students on tests in reading, mathematics, and science improved substantially between the early 1970s and mid-1980s, both in absolute terms and in comparison with whites. Since then, however, there has been little change in the relative performance of African Americans and whites in science, mathematics, or reading, and no consistent pattern is evident in writing.[73]

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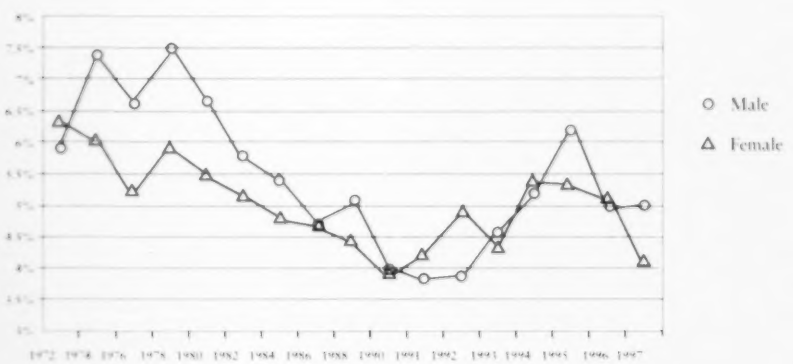
Among Hispanics, there is evidence that the performance gaps from white students decreased in the 1970s and 1980s, but recent trends are less encouraging. Among 17-year-olds, for example, recent assessments have revealed some widening of the difference between Hispanic and white students, and the 1996 gap was not significantly different from what was documented in 1975.[74]

The persistence of achievement differentials among various ethnic and racial groups has been a source of continuing concern and debate in the United States. For example, the under-representation of African-American, Hispanic, and Native American students among high-achieving students in primary, secondary, and higher education was the subject of a recent report by the blue-ribbon National Task Force on Minority High Achievement, which declared that in the absence of progress on this front, the United States will "be unable to draw on the full range of talents of our population in an era when the value of an educated citizenry has never been greater."[75]

Minority achievement in an international perspective. Despite these score differentials, U.S. minority pupils do relatively well in comparison with students in other countries. The 1991 IEA Reading Literacy Study found the familiar pattern of performance differences among different races and ethnic groups, with whites outperforming African-American and Hispanic students at both grade levels.[76] Nevertheless, as Binkley and Williams wrote, "Most groups of American students outperform the OECD average. Even the most disadvantaged American students do not differ dramatically from the OECD average."[77]

Figure 13: Event Dropout Rates, Ages 15-24, October 1972-1997, by Gender



U. S. Department of Education, The Condition of Education 1999, p. 122

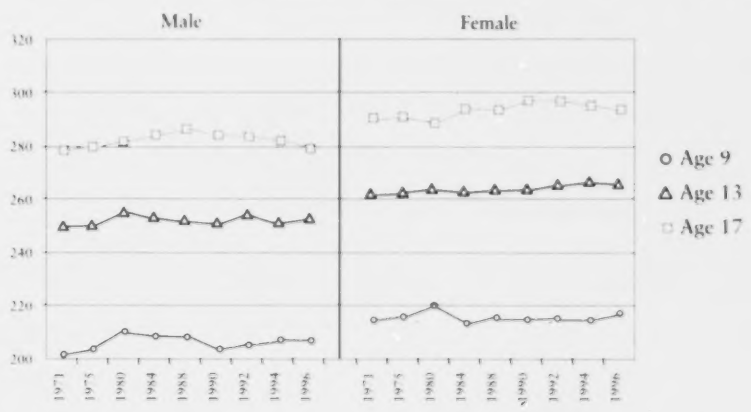
Gender

As in most industrial countries, men and women in the United States persist in school at similar rates, though in recent years females have had a slight, albeit growing, edge. The event dropout rate for males in grades 10 to 12 rose from 4.0 to 5.0 between 1990 and 1997. The comparable rate for females rose from 3.9 to 4.1 during the same period.[78] Among persons 25 to 34 years old, 87.9 percent of females but only 85.9 percent of males have completed secondary education.[79]

Achievement presents a somewhat more complex picture, with girls doing better in reading and boys in mathematics and science, especially at advanced levels. In 1996, the differences between average scores of male and female students on NAEP tests varied across the four subject areas. In mathematics, male students outperformed female students in each of the three age groups. In science, average scores for male students were higher than those for female students at ages 13 and 17, but there was no significant difference at age 9. In reading and writing, the results were reversed, with female students outperforming male students at each age or grade level.

In science, mathematics and reading the gender gaps in 1996 were not significantly different from those in early 1970s.[80]

Figure 14a: Trends in the Reading Performance of 9-, 13-, and 17-Year-Olds



J. R. Campbell, et al., 1998, Report in Brief: NAEP 1996 Trends in Academic Progress, p. 11.

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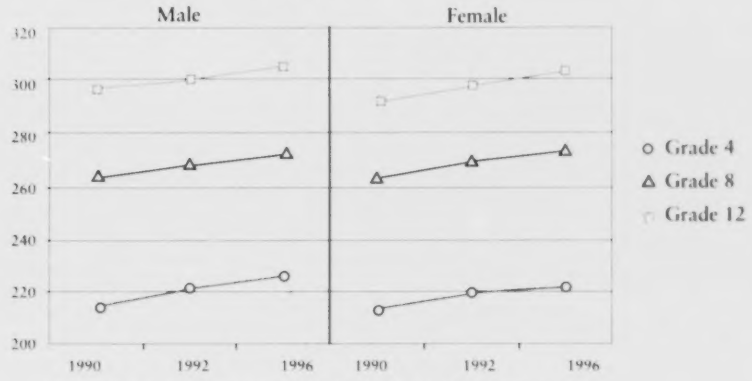
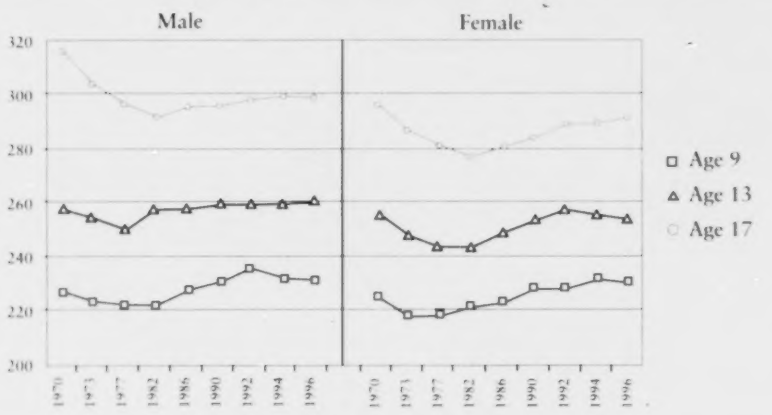
Figure 14b: Trends in the Mathematics Performance of 4th, 8th, and 12th Grade Students



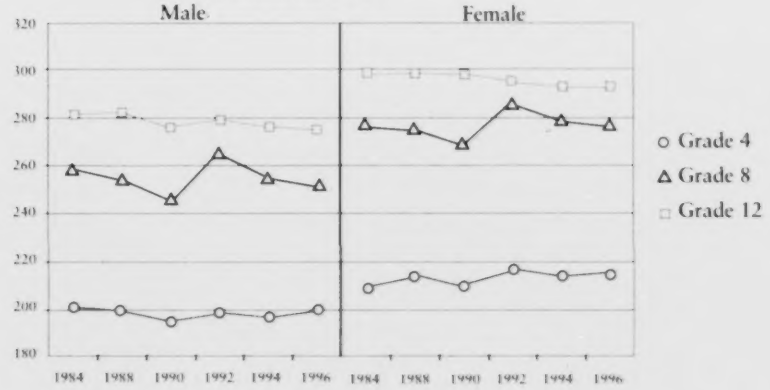
J. R. Cambell, et al., 1998, Report in Brief: NAEP 1996 Trends in Academic Progress, p. 10.

Figure 14c: Trends in the Science Performance of 9-, 13-, and 17-Year-Olds



J. R. Cambell, et al., 1998, Report in Brief: NAEP 1996 Trends in Academic Progress, p. 9.

Figure 14d: Trends in the Writing Performance of 4th, 8th, and 12th Grade Students



J. R. Cambell, et al., 1998, Report in Brief: NAEP 1996 Trends in Academic Progress, p. 12.

Rural/urban

NAEP data show that "urban fringe" students perform at higher levels than their rural or central-city counterparts.[81] Critics frequently speak about a "crisis in urban education" in the United States. In introducing a special issue on "the urban challenge," the journal *Education Week* stated that "it's hard to exaggerate the education crisis in America's cities," and commented, "When people talk about the problems in public education, they're usually not talking about suburbs and small towns. They're talking about big-city schools—specifically the ones that serve poor children."[82]

The situation of urban schools is important because minorities and poor people are heavily concentrated in cities and because racial segregation is high in most U.S. metropolitan areas. Thus, the inequities discussed above tend to be spelled out in bold relief in urban areas. As we shall see later, the bulk of major school reform projects now underway in the United States are targeted at urban schools.

Non-English-speaking students

Although immigrant students face challenges in adapting to a new culture, special services tend to be limited to programs designed for non-English speakers. The fact that many Hispanic students are recent immigrants is generally seen as a major reason that Hispanics attain lower levels of education than other ethnic groups.

Data for 1997 show that, among 16- to 24-year-olds, 24 percent of persons born outside the 50 states and the District of Columbia are status dropouts, compared

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with 10 percent for first-generation Americans and 9 percent for later-generation ones. The disparities are particularly striking among Hispanics, where the status dropout rate is 39 percent for those born outside the country, 15 percent for first generation, and 18 percent for later-generation persons.[83]

School finance

In contrast to the situation in many other countries, local sources of revenue play an important role in the financing of public education in the United States. Local property taxes have traditionally provided the basic funding for schools, with states also contributing significant percentages. The federal government supplies only 7 percent of the costs of primary and secondary schooling, mainly targeted at particular groups of students, such as those from low-income families.

Substantial reliance on local property taxes raises equity issues in that it gives a relative advantage to wealthy school districts, where property values are high. In the early 1970s, a school finance reform movement emerged to challenge the fairness of this system, first in federal courts and then in state courts. In many of the state-level cases, the plaintiffs were victorious, and states were forced to take such steps as subsidizing districts with low property values. Reformers have continued to press school finance cases based on equitable inputs. Michigan recently abolished local property taxes as the basis for financing schools, and Vermont adopted a statewide property tax.

Nevertheless, substantial inequities have persisted in the amount of money that different school districts can spend on each pupil. As a result, over the last decade the focus of the debate over school finance has shifted from inputs to outputs—from concern about *equity* in the resources going into education to a concern with whether funding levels are *adequate* to ensure acceptable educational results. As a recent report on school finance by the National Research Council put it, "It seems that finance reforms of the past, with their emphasis on the fiscal capacity of school districts, insufficiently address pressing equity questions of today, which include how to use the finance system to foster high levels of learning for all students, regardless of background, and what to do about the desperate social, economic, and educational problems that plague some central-city schools."[84]

A turning point in the discussions came in 1989 when the Supreme Court of Kentucky ruled that the state system of education was failing to meet the requirements of the state constitution, not because of spending inequities but because the quality of education in Kentucky schools was too low. The court ordered the legislature to enact sweeping changes in the entire education system—not merely in the way it is funded but in its governance, accountability, and other structures as well. Courts in numerous other states have since ruled that students are guaranteed an adequate level of educational opportunities.

Debate over school finance in the 1990s has thus focused on how to structure a finance system that will provide schools not only with sufficient operating funds, but also with professional training, incentives, and accountability mechanisms to promote student achievement. The policy debate is complicated because it is difficult both to define what constitutes an adequate education and to determine what level of per pupil funding is sufficient to achieve such a result. Technical challenges also arise when determining how much more it costs to educate children from disadvantaged backgrounds than those from more privileged circumstances.

Discussions are also complex because, as we shall see in the following section, reformers differ in their view of what steps will lead to higher student performance. Some see professional development of teachers and administrators as the key to improvement. Others focus on the importance of incentives and favor solutions such as charter schools or vouchers. Each of these approaches implies a different way to allocate funds.

3. School reform strategies

The standards movement has developed in large part because of the widespread belief of the American public that schools do not provide students with the level of education they need to be competitive workers, citizens, and family members in the years ahead. Much of this concern about quality centers on urban schools and those serving high proportions of low-income and minority youngsters.

With public concern rising over issues of quality and equity, a national debate developed in the United States during the 1990s over which strategies are likely to be the most effective in improving academic achievement, especially in schools serving high proportions of disadvantaged students. A number of distinct ideas have emerged about the roots of the problems facing U.S. schools and promising ways to address them. These ideas, in turn, have become the basis for a number of distinct strategic approaches to school improvement.

The most important ideas currently being debated by school reforms in the United States include:

Decentralized governance and management. As already mentioned, the United States has a decentralized system. Public education is, constitutionally, a function of the 50 states, which in turn delegate most authority for operating schools to local districts. Federal funds account for only 7 percent of all spending on primary and secondary education, with most of this money targeted at specific educational needs, such as those of disadvantaged or handicapped students. Despite this relatively decentralized system, many school reformers believe that the roots of low student achievement rest in overly centralized governance structures that deny

local schools the freedom and flexibility to meet the needs of their particular students. They assert that educational decisions, including instructional choices, should be made as close to the point where they are implemented as possible. Numerous districts have experimented with site-based management systems under which districts devolve decision-making authority to individual schools or principals share authority with teachers and others within schools.

Diversity of learning options. As a large country with a diverse and often independent-minded citizenry, the United States has traditionally been characterized by considerable variety in its institutions, including its schools. Private and religious primary and secondary schools have flourished alongside public ones, and the educational landscape is replete with schools organized around particular pedagogical philosophies. In recent years, such supply-side diversity in schooling has increased. Thousands of public schools have been reorganized as "magnet" schools specializing in particular academic areas such as fine arts or the sciences–often as a means of promoting racial desegregation. The push for institutional diversity has also been prompted by findings that students differ widely in their learning styles and thus in their educational needs.

Another sign of increased supply-side diversity is the push for "charter schools." These are regular public schools that agree to teach to specified academic standards in return for being exempted from many of the rules and regulations that restrict the actions of other public schools. The first charter school was established in 1992, and, according to the U.S. Department of Education, by 1998 more than 1,100 of them were operating in 27 states and the District of Columbia.

A parallel trend has been an increase in the number of primary- and secondary-level students being schooled at home by their parents. Estimates put the figure as high as 1.2 million children, or about 1 percent of the school population.[85] In the past most parents who taught their children at home did so because they believed that the climate and teaching in public schools were inconsistent with the family's religious and moral values. In recent years, however, such parents have become a minority among home schoolers. A growing number of U.S. parents are keeping their children at home because of disillusionment with the quality of instruction or because they believe that public schools are unsafe. Many parents take advantage of courses available on the Internet to reinforce their own knowledge.

Market competition. Some school reformers believe that public schools lack adequate incentives to raise achievement levels because they enjoy a "monopoly" position and benefit from a guaranteed stream of students. If schools were put in the position of having to compete for students, this argument runs, they would find ways of improving the quality of their offerings. Such reasoning is implicit in charter schools and voucher schemes, and it assumes that principles of the economic marketplace can be applied successfully to the delivery of social services such as education.

Parental choice as a right. Giving parents the right to choose the school that their child will attend is variously seen as a way of introducing diversity into school systems and causing schools to be more efficient and effective. Since the late 1980s, school districts have offered three basic types of choice programs: intradistrict ones in which students can attend various schools within their home district, interdistrict ones that allow students to chose public schools outside their own district, and magnet school programs under which schools offer distinctive educational programs designed to attract students with particular interests. Some reformers also believe that, regardless of any strategic value for improving education, parental choice is a fundamental right of parents and children.

Local schools as the focus of reform. During the 1990s, a growing number of reformers argued that the proper unit on which to focus attention is the local school. They argued that the school is the place where all of the elements of education come together–teaching, learning, curriculum, administration, testing, etc.–and that the key to reform is to ensure that schools function as harmonious and effective organisms.

Value of incentives. Many policy makers believe that the key to successful reform lies in providing administrators, teachers, and students with the greater incentives to perform at a high level. To accomplish this, many states have set up accountability systems typically involving both carrots, such as financial rewards to schools that surpass learning expectations, and sticks, including state takeovers of schools with a high proportion of low-achieving students.

None of the ideas described above can be said to imply a particular full-blown strategy for school improvement. Rather, school reformers have put together various combinations of these and other ideas. At least four distinct approaches to school improvement have emerged in the United States over the last decade:

1. **Systemic reform**–This strategy, an important product of the standards movement discussed above, seeks to align all of the major elements of an educational system so that they are working harmoniously toward specific learning objectives. The first step is to develop public consensus around an ambitious set of educational outcomes, such as those contained in national standards. The next step is to provide schools with the resources and the operational latitude to work toward these outcomes; the final component is a system under which students, teachers, and entire school communities are held accountable for reaching these goals.

Numerous states have launched systemic reform programs aimed at coordinating curriculum standards with the content of curricula, textbooks, and statewide examinations. The performance of students, teachers, and schools is then monitored, and a variety of rewards, including financial awards to teachers, and sanctions, including taking over failing schools by the state, are then imposed. Teachers' professional development is usually key to the success of system reform efforts.

2. **Governance changes**–Many reformers believe that new governance structures are the key to school improvement. School-based management is one manifestation of this approach, charter schools are another. Charter schools have been organized by a wide range of sponsors, including groups of parents or educators, community organizations, and teachers unions. Proponents view charters as a way of introducing diversity and competition into the delivery of education while remaining within a public framework. Some charter schools are started from scratch by parents or educators committed to a particular educational approach or who wish to serve a particular group of students. In other cases, existing public schools are reorganized as "conversion" charters.

The charter school approach combines belief in the virtues of decentralization, diversity, parental choice, and competition. The charter school strategy differs from voucher plans in the important respect that charters are all publicly operated and that no charter funds go to private or parochial schools.

3. **Whole-school reform**–One approach to educational improvement that attracted considerable backing in the United States in the 1990s is the notion of "whole-school" reform. This approach begins with the assumption that the local school is the most promising unit on which to focus reform efforts. It contrasts with strategies that view areas such as curriculum reform, better teacher training, or governance changes for entire school districts as the keys to school improvement. Whole-school reform focuses on schools as organic units and looks for ways to ensure that their various components work together efficiently and effectively in pursuit of agreed-upon goals. Such projects typically emphasize setting standards, aligning teaching and testing with curriculum goals, and professional development.

Whole-school reform experiments began to appear in the 1980s, and the approach was given a major boost in the 1990s with the founding of the New American Schools Development Corporation, now known as New American Schools. This project, which has received federal and private funding, fostered the creation of what President George Bush called "break the mold" schools. The Federal Title I program aimed at low-income pupils now offers subsidies for districts that adopt designs on a specified list of such schools. In February 1999, the American Institutes of Research published a study that evaluated 24 whole-school designs on their effectiveness in improving student achievement.

The whole-school approach is compatible with the systemic reform approach and can be used under both centralized and decentralized governance systems. It can also be combined with parental choice and charter schemes.

4. **Educational vouchers**–Many reformers who believe that changing incentives is the key to school improvement favor educational vouchers. Under this approach, parents are given financial chits that can be used to pay for their child at any

school, public or private. Although vouchers schemes have been the topic of impassioned debate in the United States, the strategy has thus far been attempted in only two relatively small publicly funded experiments, both directed toward low-income children. There are several privately funded voucher programs, however, and one state, Florida, will soon launch a statewide voucher experiment.

Voucher schemes have attracted support from an unlikely combination of free-market conservatives, who accept the economic model of market competition as relevant to education, and minority group leaders who have become disillusioned with the quality of inner-city schools and have given up on the capacity of the existing system to improve. One serious restraint on the spread of vouchers has been court rulings barring the use of public funds to pay the tuition of children in Roman Catholic or other parochial schools.

Whole-School Reform in Memphis

Memphis, Tennessee, is a large urban school district that serves 118,000 pupils, three-quarters of them from low-income families. Five years ago, only 40 percent of students entering high school were meeting the state's minimum-competency standards, and more than one in four high school students eventually dropped out of school. In 1995, Gerry House, the city schools superintendent, decided to take vigorous action.

Her first step was to draw up a set of standards for what Memphis students should know and be able to do. Site-based decision-making councils were established in every local primary and secondary school, and each school was required to draft a school improvement plan focusing on student achievement. The plan had to involve some model of "whole-school" reform under which every aspect of the school—curriculum, scheduling, teacher training, assessment, accountability, etc.—was coordinated and focused on the goal of increasing student achievement

The district held a fair at which designers of various reform packages were invited to present their wares to representatives of the district's 164 schools. The largest number of schools opted for Roots and Wings, a program that emphasizes reading instruction, cooperative learning, and individualized tutoring for the neediest students. Others chose Con-NECT, an approach that makes heavy use of technology, or the Modern Red Schoolhouse, which has a standards-driven curriculum that emphasizes principles of democratic government. Various schools have adopted more than a dozen such models, some designed by the schools themselves.

An initial study of the first 25 elementary schools that implemented whole-school designs showed that, two years later, pupils in these schools had made significantly greater gains in achievement test scores than pupils in a control group.

Differences among strategies. There are some important philosophical differences among the various strategies for school improvement described above. In a broad sense, debate has evolved into a conflict between those who want to work within existing structures to improve the current system and those who believe the current structures are beyond repair. Standards-based reformers are on one side of this debate, voucher proponents at the other. Charter backers are in the middle—looking for ways to increase diversity and introduce the incentives of competition but doing so within current structures.

Reformers also differ over whether changes within the current system should be incremental or comprehensive. Some see the answer in particular strategies, such as smaller class size or better teacher training, while others insist that a package of reforms is necessary. Debates over the best strategy for improving schools also reflect a broader political discussion about the proper role of government. Voucher proponents want minimal governmental involvement, while others believe that tampering with public control of schools would be a serious mistake.

The facts that so many ideas have surfaced about how to improve schools and that so many competing movements have emerged reflects the diversity and openness of U.S. education. Americans have always been cautious about prescriptive national policies, and educational advocacy has a long tradition. Educational issues have always been debated and pursued by a wide variety of organizations, from parent and citizen groups and teacher unions to business associations, and the 1990s has seen a proliferation of advocacy groups, think tanks, and forums.

The competing whole-school models have themselves come from a wide range of sources, from individual academics to Outward Bound, a wilderness program. In a recent analysis of the whole-school reform movement for the Thomas B. Fordham Foundation, James Traub suggested a scenario under which "elements of various species of reform" will eventually be combined to create large-scale change. "It is a very messy way of discovering the truth," he said, "but it is also a peculiarly American way."[86]

4. Information technology

Students growing up in the United States are exposed daily to a wide range of information technologies. Television and radio play an important part in their daily lives, as do computer games, video games, Walkmans, and CD-ROMs. Public television is an important educational force for U.S. children along with commercial channels that specialize in history, science, or the arts. The software industry, which barely existed two decades ago, now rivals the publishing industry as a source of information for children and adults alike. Teachers seeking to sup-

plement the traditional technologies of books and whiteboards in their classroom teaching have a virtually unlimited supply at their fingertips.

Educators, of course, have traditionally been rather slow to embrace new communication technologies. Mass printing was developed by the mid-15th century, but it took another three centuries for textbooks, perceived as a threat to the authority of teachers, to become common in schools. The telephone, radio, film, television, and other modern technologies have had marginal impact on the teaching and learning process. It has been said that the only significant technological innovations of the 20th century to find a secure place in U.S. schools are the loudspeaker and the overhead projector.

This situation now appears to be changing, mainly because of the pervasiveness of the computer and related technologies in today's world. A significant turning point in public attitudes occurred in 1982 when *Time* magazine selected the computer as its "Man of the Year." Parents and others soon began pressuring school officials to invest in the new technologies so as not to leave students unprepared for the information age, and the availability of computers in U.S. schools has grown ever since. According to Market Data Retrieval, a research firm that tracks computer use in schools, the number of students per instructional computer in U.S. schools has plummeted from 19.2 in 1992 to 5.7 in 1999, while the number of students for each of the more powerful and versatile multimedia computers has dropped from 21.2 in 1997 to 13.6 in 1999.[87]

The growth of computers in schools has been paralleled by huge investment in new learning techniques on the part of governments, foundations, and private investors. In 1994, the federal government made a commitment to assist every school and classroom in connecting to the Internet, and the Telecommunications Act of 1996 made telecommunications services and technologies available to schools and libraries at discounted rates. According to Market Data Retrieval, 90 percent of U.S. schools report having Internet access, up from 32 percent three years ago. About 71 percent of schools have such access in at least one classroom, which suggests that access is moving well beyond school libraries and computer laboratories. More than half of schools have their own home page on the World Wide Web.[88]

Although most U.S. students now have at least minimal access to computers in their schools, educators are only beginning to learn how to make the most effective use of these powerful new machines. Two important policy issues are (1) how to integrate computers into the instructional process, and (2) how to make teachers comfortable using them.

The initial strategy of many school administrators was to make a decision on a particular brand of hardware to purchase and then to look for ways in which those particular machines could enhance teaching and learning. This approach

LiteracyLink

In addition to experiences with individual multimedia products and web-based modules, there are ambitious attempts to provide an integrated system at the network level. One of the most sophisticated cases in progress is LiteracyLink, an initiative begun in July 1996 in response to the growing nationwide demand for basic skills training. Funded by a five-year, $15 million grant from the U.S. Department of Education, LiteracyLink is creating an integrated instructional system of video and online computer technology that will help adult participants advance their workplace skills. It also provides a second chance for high school dropouts to prepare for the General Equivalency Diploma (GED) exam. The online system is being conceptualized as three complementary components: LitLearner, LitTeacher, and LitHelper.

LitLearner is a series of online lesson modules organized around the five test areas covered in the GED exam: Writing Skills, Social Studies, Science, Literature & the Arts, and Mathematics. The modules will have two components—lessons and assessments—and will consist of interactive tutorials and/or simulations. LitLearner also includes the production and distribution of new video materials at the pre-GED (grades 5-8) and GED levels that can be delivered by broadcast television or videotape.

LitTeacher addresses the pressing need for staff development resources and training; it provides a comprehensive "virtual resource center" that will include training in technology issues, technology assistance, a menu of materials on literacy education, professional development videoconferences, and tailored online access to a wide assortment of existing literacy resources.

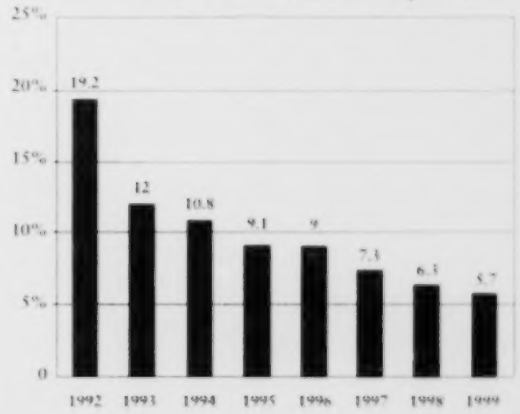
LitHelper is designed to provide online assessment that enables both learners and service providers to get a better and more immediate sense of the most appropriate and effective activities for the learners' specific needs.

For more information, visit the web site: http://www.pbs.org/literacy/about/abouthome.html

often proved frustrating in situations where available software did not relate easily to existing curricula. Over the years, teachers and administrators in the United States have sought to reverse the process by first seeking to clarify learning objectives and then looking for hardware and software with the capability to serve these ends. Despite this change in orientation, progress has been slow.

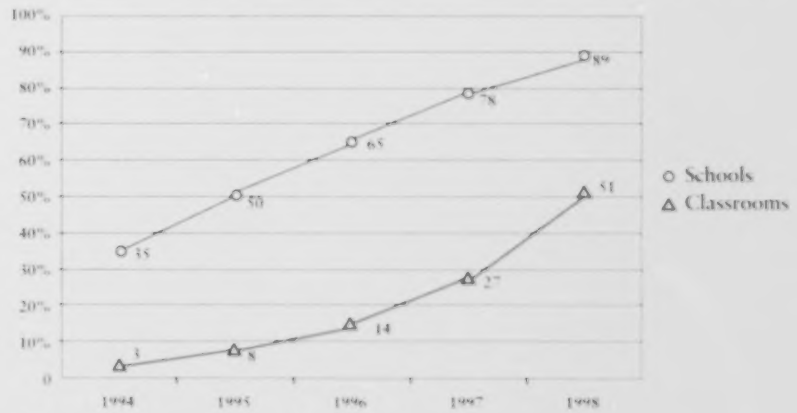
In their third annual report on education technology, *Education Week* and the Milken Exchange on Education Technology surveyed 1,400 teachers on their use of and attitudes about digital content. The survey reported that although 97 percent of teachers surveyed use a computer either at home or in school for professional activities, nearly four in ten teachers say that their students do not use classroom computers at all during a typical week. Only 53 percent reported using software to enhance instruction in their classes, while 61 percent said that they use the
54 Internet for such purposes.[89] The study found that, although there are many

Figure 15a: Technology Counts: Building the Digital Curriculum, Students/Instructional Computers



Education Week and the Milken Exchange on Education Technology, 1999, Technology Counts, p. 59

Figure 15b: INTERNET: Number of Schools and Classrooms Connected



Education Week and the Milken Exchange on Education Technology, 1999, Technology Counts, p. 59

exceptions, teachers tend to use computers to do things they already are doing—though presumably better and faster. Even at the secondary level, teachers tend to use computers for basic tasks such as word processing rather than exploiting computers as a learning tool. For example, only 22 percent of science teachers reported using software related to "simulations/exploratory environments" at least three times during the previous year, and only 17 percent incorporated spreadsheet or database software that often.[90] Sixty-seven percent of teachers in classrooms with six or more instructional computers reported relying on digital content to a "moderate" or "very great" extent, compared with only 40 percent of teachers whose classrooms have only one or two computers.[91]

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The principal reason that more teachers do not use computers for instructional purposes, the survey found, is that, with the exception of so-called integrated learning systems, most software is designed to be a supplemental resource. "Teachers are still relying mainly on textbooks to deliver the core of the curriculum," the report stated. Other factors cited were the difficulty in finding good software, lack of time to prepare or try out software, and the fact that one out of five teachers using instructional software said that they had to pay for it themselves.[92]

Experience with computers in the United States over the last decade and a half suggests that there are a number of keys to making effective use of new technologies in schools. Curricula must be designed in such a way that they can use such technologies, and an infrastructure must be put in place to provide teachers and administrators with technical and other support. Since teachers cannot be expected to create their own courseware any more than they are expected to write their own textbooks, relevant software must be provided. Perhaps most important are the attitudes and training of teachers. In the early days of classroom computing, it was a truism that students and younger teachers were more comfortable with the new technologies than were experienced teachers. Since most teachers now have computers in their homes, however, that attitudinal gap has narrowed. The *Education Week* survey found that teachers who had received technology training over the past year are more likely to use software and Web sites as part of their instruction. Moreover, teachers were more likely to consider themselves prepared to use computers if they had received training aimed specifically at integrating technology into the curriculum rather than instruction in basic computer skills. The training picture, however, is mixed. A majority of teachers surveyed (57 percent) reported receiving both kinds of training, but only 42 percent of respondents had more than five hours, and only 29 percent had that much training focused on curriculum integration.[93]

Equity remains an issue in the distribution of access to computers in U.S. classrooms. The number of students per instructional computer is just about as low in schools serving poor communities as it is in more affluent ones, but the latter continue to have an advantage—albeit a declining one—in access to the Internet. In 1994, schools in which less than 11 percent of students qualified for subsidized lunch programs were twice as likely to have Internet connections. By 1998, the gap had narrowed to 87 percent versus 80 percent. On average, the larger the school, the more likely it was to be connected to the Internet.[94]

As computers become an increasingly familiar part of the life of U.S. schools, educators and others continue to speculate on future directions for digital instruction. Much of this speculation has to do with the capacity of instructional technology to outstrip the traditional means of delivering education, both physical and chronological. Instructional technology offers the opportunity to extend learning outside the limits of the school day and beyond the walls of the schoolhouse. As Haddad writes, "When education is seen as a continuum, with no marked beginning and

end, the architecture of education services and the allocation of resources will be affected. No longer should countries view formal educational institutions as the sole educators, or the only institutions worthy of financial investment. Other channels, from educational television to offerings of virtual schooling over the Internet or Intranet, to community learning centers, to training schemes, will have to be figured into the equation."[95]

Thus far there is little evidence that educators and policy makers are thinking in such terms–at least at the primary and secondary levels. Some primary schools, especially those serving low-income students, make use of integrated learning systems to teach basic skills such as reading and arithmetic, and many home schoolers use courseware from the Internet. In short, most U.S. pupils continue to receive instruction in traditional classrooms.

Nevertheless, some subtle changes appear to be underway, especially in the way teachers are going about their work. Computers and the Internet make information plentiful and cheap and force redefinition of the principal role of the teacher from a source of information to the coach who can lead students to learn on their own. An independent evaluation of one statewide technology initiative in Rhode Island found that 66 percent of teachers reported becoming more reflective about their teaching, 59 percent found themselves more in the role of coach and being willing to be taught by their students, and 52 percent reported spending more time working with other teachers on instructional planning.

Ronald Thorpe, who was involved in the Rhode Island program, listed six shifts in attitude that flow from integrating technology into the instructional process:

- From the narrow, restrictive notion of a finite knowledge universe to an expanding knowledge universe rich in context and connections.

- From the teacher as holder of all information to the teacher as coach and guide for younger, less experienced learners.

- From repeating the old to creating the new.

- From merely gathering information to focusing on essential questions about the information and spending more time on analysis, synthesis, and evaluation.

- From valuing only one or two learning modes to drawing on a much fuller spectrum of learning modes.

- From learning that takes place primarily through each person's working alone to learning in collaboration with others.[96]

The evolution of instructional technology in U.S. classrooms over the last decade and a half can thus be understood as a shift in focus from fascination and preoccupation with the technology in and of itself to greater understanding of the way this technology can serve instructional goals, including those not yet fully envisioned. The general news media and educational journals are replete with "gee whiz" stories about particular learning activities that computers make possible, such as primary school pupils all over the world collecting data on acid rain and analyzing it from a central student-run source. While inherently interesting, these activities take on lasting impact only when guided by a vision of broader instructional goals, such as teaching the nature of the scientific method. As Haddad writes, "It is important to remember that technology is not an educational activity—it is a tool, a means to an end. Technologies can be effective if they are designed and implemented deliberately to enhance students' learning and collaboration."[97]

5. Education for employment and career changes

A recent report to the Organization for Economic Cooperation and Development (OECD) on the transition from education to work characterized education in the United States as "at once vocational and academic." It noted that "programs are often purposeful blends so that academic knowledge becomes applied in the workplace, and workplace skills are harnessed to reinforce academic pursuits." Consistent with such an approach, there is rarely a clear transition from schooling to the workplace in the United States. "Rather than following a linear movement from school to work," the report observed, "young people often combine both activities–pursuing one part-time and the other full-time, intermittently undertaking one activity or the other, or re-engaging either activity after a long hiatus."[98]

The relationship between education and the workplace in the United States is striking in at least two respects. First, in contrast to most other countries, it is commonplace in the United States for high school students to hold part-time jobs, often in supermarkets or fast food restaurants. Some students take after-school and weekend jobs out of economic necessity to help with the family finances; others, however, do so to acquire clothing, music systems, cars, or other consumer items. This custom has both positive and negative effects. When students take jobs, even menial ones, they gain an understanding of how the workplace operates and are exposed to values such as the need to show up for work on time. On the other hand, teachers complain that part-time jobs often cut into the time students have available for their academic pursuits.

A second striking characteristic of education and the workplace in the United States is that it is highly forgiving. As the report to OECD put it, "The United States is the land of second, third, fourth, and even fifth chances."[99] In contrast to countries where students proceed from one level or type of education to another in

lock-step fashion, the United States offers many paths to career goals. Students who fail to obtain a high school diploma with their peers at age 18 can obtain an equivalency diploma later on by taking courses and taking examinations in high school subjects. Many institutions of higher education operate continuing education programs in evenings and on weekends for working adults, and many employers offer training and education opportunities at their offices and factories. Some firms, mainly in high-tech fields, are even authorized to grant graduate degrees. Specialized schools offer training and credentials in a wide range of vocational areas, from hairdressing to paralegal work. With the advent of distance learning, opportunities for training and education outside the general education system no doubt will increase exponentially.

Public vocational education became a part of the U.S. education system in the early 20th century when vocational schools were organized around particular industries, such as the building trades or electronics. Following World War II, the concept emerged of the "comprehensive" high school under which public secondary schools offered both vocational and general education tracks.

From the very beginning, policy makers have waged vigorous debates over how best to design vocational curricula. Some have favored highly focused training for specific jobs, while others have emphasized broader skills transferable to a variety of them.

Beginning in the 1960s, the quality of vocational education in the United States went into a period of decline. Academic standards tended to be quite low, and vocational schools came to be known as "dumping grounds" for students who had not succeeded in regular academic settings. Data show that graduates of high school programs with a vocational focus tend to learn substantially less than students with similar characteristics who attend high schools with a broader academic focus.[100] The declining reputation of vocational education programs in high schools can be seen in enrollment figures. As noted on page 27, between 1982 and 1992, there was a more than 50 percent decrease in demand for vocational education courses of study and a corresponding increase in demand for college preparatory and general education program enrollment.[101]

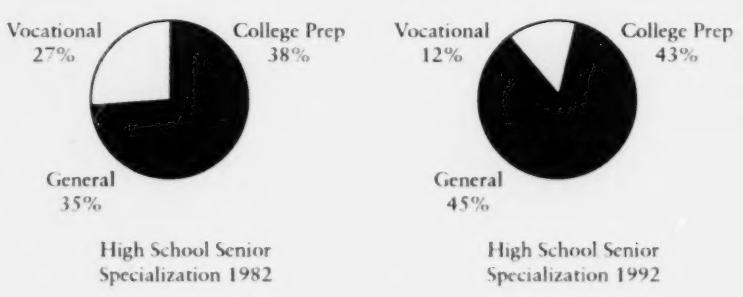
In the 1990s, however, policy makers took a new tack. It became clear that the workplace of the future would require not only that workers possess more sophisticated skills than in the past but that they also be able to move from one job to another. In 1990, the federal government adopted legislation providing funds for programs that "integrate academic and vocational education...so that students achieve both academic and occupational competencies." Programs following this philosophy characteristically emphasize well-sequenced curricula that enhance academic and generic skills needed by all workers, use facilitative rather than didactic instruction, emphasize collaboration between vocational and academic teachers, and pay attention to the skills and knowledge students need to make the transition

from high school to work or college.[102]

Another approach that has gained considerable support is "school-to-work" programs designed to familiarize high school students with the world of work. In the past, many young people were exposed to adult work through farming and small businesses run by their families or neighbors. For most students today, however, exposure to the workplace is limited to menial "youth jobs." To overcome this disengagement from adult work, many schools, especially those in large cities, have begun offering programs in which students engage in structured work and learning experiences outside school through means such as internships, mentoring, and "shadowing" of adults involved in various professional activities.

One type of institution that has played an important role in the school-to-work transition and that has been pivotal to second chances has been the community college. These public two-year institutions were founded at the turn of the century as a way of increasing access to higher education in a rapidly growing and industrializing nation. Enrollment soared when baby boomers reached college age in the 1960s, and community colleges now account for 44 percent of postsecondary enrollment.

Figure 16: Change in High School Senior Specialization: 1982 to 1992



R. Zemsky, et al., 1998, The Transition from Initial Education to Working Life in the United States of America: A Report to the OECD, p. 4

Community colleges serve commuting students and have traditionally juggled three distinct and sometimes conflicting missions. Some students seek training and credentials, typically an associate degree, in a vocational field, such as computer programming or dental hygiene. Others use them as a convenient and inexpensive way to obtain two years of general education and then transfer to a four-year college. Community colleges also provide lifelong learning in a wide range of areas, both professional and recreational.

Enrollment in community colleges is expected to grow in the next few years as the federal HOPE Scholarship program is implemented. This program, designed to help middle-class families bear the cost of higher education, provides for a two-year tax credit of US$1,500, which is roughly the annual tuition of community colleges.

Considerable controversy has arisen in recent years over the role of community colleges as stepping-stones to a bachelor's degree for students who cannot afford four-year colleges or who did not go on to college immediately after high school. Demand by employers for more skilled workers has focused attention on this mission of community colleges, but the proportion of community college students who transfer to four-year schools has been dropping since the early 1970s. Some critics blame community colleges for not pushing this part of their mission, while others say that four-year colleges put up bureaucratic roadblocks to potential transfer students. Several states have recently passed legislation guaranteeing that credits for core academic courses obtained at community colleges will be accepted at public colleges and universities.[103]

6. Knowledge-based decision making

The United States has long been a pioneer in the field of educational evaluation. It was at the forefront of efforts by the International Association for the Evaluation of Educational Achievement to initiate international assessments of student performance, and U.S. educators and researchers played a central role in the Third International Mathematics and Science Study. In keeping with this tradition, an important trend in the United States during the 1990s has been a growing effort to inform policy decisions with data and research. Political and educational leaders are increasingly asking whether proposals that come to them are "research-based." The practice establishing "benchmarks" at a particular time and then issuing reports on the financial condition and achievement progress of individual schools, school districts, and even entire states is growing.

The trend toward knowledge-based decision making is, to a large extent, a response to pressure from proponents of systemic reform and others to set quantifiable goals for education and then to hold practitioners accountable for reaching these goals. Such an approach presumes the availability of data on topics such as student achievement, and, as discussed earlier, the result has been a proliferation of state testing programs. A growing number of states are issuing "school report cards" that pull together data on topics such as test scores, attendance, and dropout rates and that allow parents and voters to compare schools with each other on a variety of criteria. Increasing amounts of data are also available at the state level. The National Assessment of Educational Progress is publishing more

and more data that make it possible to compare the performance of state education systems, and *Education Week*, a weekly education newspaper, publishes annual comparisons of state education systems.

Knowledge-based decision making has encouraged research aimed at identifying practices that will make teaching and learning more efficient and effective. An early example of policy makers using research to inform their decisions is Project STAR in the state of Tennessee described in the accompanying box.

Not all states, however, have taken such a careful approach to policies on class size. In the late 1990s, California embarked on a US$1.5 billion a year effort to reduce class size across the boards in elementary grades. While the policy led to a slight rise in scores on standardized tests, it also had some substantial negative side effects. The need to hire so many new teachers forced schools to lower their standards and to rely on makeshift classrooms, and an exodus of teachers from inner-city schools to wealthy suburban districts was also reported.[104]

Much educational research is now aimed at identifying "best practices" and putting this information at the disposal of educational consumers, both individual and institutional. As mentioned above, the American Institutes of Research recently published a study that evaluated 24 whole-school designs on how well they promoted student achievement. The findings were presented in a graphic style that was popularized by a well-known consumer magazine and was designed to make the information accessible to members of local school boards and other interested citizens and policy makers. Another recent example is *No Excuses*, a report sponsored by the Heritage Foundation that profiles seven principals of low-income schools who succeeded in maintaining high standards of achievement for their schools.[105]

Class Size in Tennessee

In the mid-1980s public pressure was mounting to reduce average class size in the early grades. Tennessee legislators were nervous about making the huge investment that would be required to reduce class size across the board, especially if it turned out—as some scholars were predicting--that such a move would not have a significant impact on student achievement. So the legislature decided to try out class reduction on a small scale and in a systematic way. Starting in 1985, 6,500 kindergarten students were randomly assigned to small classes (13 to 17 students), regular ones (22 to 25) or regular classes with teaching aids. Pupils stayed in the three types of classes through third grade.

Researchers with Project STAR found that students who had spent four years in the smaller classes performed at significantly higher levels than those in the other two groups even when they went on to regular classrooms in the higher grades. The positive effects have continued to be felt, with these students graduating from high school and going on to college at higher rates. The impact was greatest on students from minority groups and those in inner city schools.

Another area of educational research that has attracted considerable public interest is the investigations of brain researchers and cognitive psychologists into the process by which human beings acquire knowledge. Findings in this area, which have been the topic of cover stories in *Time*, *Newsweek*, and other national publications, have focused public attention on the importance of early childhood education. They have driven home the message that many learning problems can be addressed through clinical intervention, and they have cast doubt on many prevalent teaching practices. As Haddad put it, such research "points to the need to move away from education as it is presently constructed: individual, isolated-learning, extracted from context, focused on superficial (rote) learning. Brain growth and development dictate that education be structured to allow children to make sense of their environments, solve problems, and learn through social activities that have meaning to them in an environment that is secure and challenging."[106]

An obvious contributing factor to the new emphasis on knowledge-based decision making is the fact that computers have made it possible to generate and to use more data than in the past. As already noted, North Carolina, for example, now calculates how much each primary and secondary student progresses in core academic subjects each year and then uses these data to evaluate the performance of their school. Such a value-added approach would have been impossible before the advent of sophisticated computer programs.

The trend toward knowledge-based decision making is not without its problems. Educational research suffers from comparison with the model of medicine, where researchers routinely develop hypotheses and then test them on large numbers of persons using systematic samples and control groups. Schools and even single classrooms are complex social entities that cannot be readily transformed into laboratories for controlled experiments, and there are practical and ethical limitations on the extent to which researchers can make use of control groups. Moreover, education lacks the system of refereed journals, continuing education requirements, and other customs that the medical profession has developed to share findings and put them at the disposal of practitioners.

Another problem is that, even when research findings are well known, they are often ignored by policy makers who have particular political agendas. For example, a considerable body of research shows that, in and of itself, retaining students who are not performing at their appropriate grade level does not work. Nevertheless, a movement to "ban social promotion" is now sweeping through the country. The Project STAR findings were all but ignored when they were first released in 1990. It was only when some state governors and President Clinton began pushing the idea of smaller classes that they became widely circulated.

Despite such problems, the United States is moving toward development of national capacity to document and analyze data on educational performance with the intent of providing feedback to policy makers.

7. Public-private partnerships

As in other democratic countries, a major debate is underway in the United States over the relative roles of the government, independent, and private sectors in meeting social needs such as education. In the words of the recent report of the National Research Council on school finance, policy makers at all levels "are examining previously unexamined assumptions about how to deliver publicly financed services and are moving away from an exclusive focus on uniform public provision to public financing with various forms of provision, including private-sector provision."[107] The issue of the proper balance between public and private interests and responsibilities is most visible in the movements to promote charter schools, parental choice, and vouchers, many of whose supporters say they are seeking to break what they call the "monopoly" that public schools have had on the delivery of education since the mid-19th century. By empowering parents to play a role in enrollment policies and by delegating operational control of schools to parents, teachers, and other sponsors, the argument goes, schools will be more effective, efficient, and responsive to the needs of students and families. Even many who favor more traditional public management of schools, however, are looking for ways to build partnerships with private interests.

The proportion of U.S. students enrolled in private elementary and secondary schools has been relatively steady over the years. Private enrollment rose from 8 percent in 1910 to a peak of 14 percent in 1959, and since 1970 it has hovered around 10 to 11 percent. The proportion in 1990 was 11 percent, and it is projected to be the same in 2000.[108] With the exception of the growing number of families engaged in home schooling, there is little evidence that Americans are fleeing public schools.

Like citizens in other countries, however, a growing number of Americans are coming to the conclusion that the challenges of education are too great to be entrusted to government alone. Many would agree with Haddad when he wrote, "No government alone will be able to meet future demands and realize the reshaped vision for education for all, relying totally on public financing and public human resources. In fact, it would be counterproductive for the public sector to monopolize the business of education development. . . . All other segments of society have high stakes: learners and their families, learning facilitators, civil society and the business sector. All these stakeholders should be drawn in as partners in the process of rethinking of education to meet the demands of the age of globalization and information."[109]

In one sense there is nothing new about this. As already noted, the United States has always had a decentralized system in which schools were rooted in local communities, and schools have relied on volunteer labor by parents and other concerned citizens. Policies have been debated and shaped by a wide variety of advocacy groups, and functions that are carried out by governmental agencies in other countries–most visibly publishing textbooks and designing and administering tests–have been carried out by private firms.

Nevertheless, the 1990s have seen a proliferation of interest in building partnerships among public, independent, and private interests, and these have taken numerous forms. One familiar model has been "adopt-a-school" programs under which local businesses provide financial support, volunteer tutors, and other resources to schools in their communities. Such support has tended to focus outside the core academic work of schools, but this has been changing as schools find themselves needing to look beyond traditional funding sources to boost academic performance. In Memphis, Tennessee, for example, the business community, conscious of its own need for educated workers, helped raise US$1.5 million for a new professional development center to support the school district's "whole-school" reform program. (See Box on page 51.)

The 1990s have also seen an increase in the number of situations in which schools and school districts contract with private enterprises. Schools have long turned to for-profit contractors for services such as bus transportation, food service, and maintenance. In recent years, though, they have been turning to such firms for activities closer to core activities ranging from administrative and financial services to running Title 1 programs and college counseling services. In some cases, school districts have contracted with private firms to run entire schools. One company, Edison Schools Inc., currently runs 53 schools under contract with school districts and 26 more charter schools.

The number of companies offering tutoring, college counseling, test preparation, and other educational services directly to students and their families has proliferated. One company, founded only two years ago, is now offering Advanced Placement courses online to students who want to prepare for the AP exams offered by the College Board. Similar trends are apparent at the tertiary level. The University of Phoenix, a for-profit institution that is barely two decades old, is already the largest private university in the country. A recent report by Merrill Lynch Inc. estimated that US$70 billion was spent on all sectors of for-profit education in the United States in 1998 and predicted that this will reach US$100 billion by 2001.[110]

U.S. INTERNATIONAL ASSISTANCE FOR MEETING EFA GOALS

The relationship of education to eradication of poverty and to development was a theme of the World Conference on EFA, the Social Summit in Copenhagen, the Children's Summit in New York City, and the summits in Rio, Beijing, and Cairo. The United States joined the nations of the world in the call for "education for all." In the ten years since Jomtien, the United States has assisted the developing world in meeting EFA goals—always in partnership with the host country, sometimes taking the lead, at other times supporting the efforts of other donors and organizations.

1. U.S. Funding for Basic Education in Developing Countries, 1990 to Present

As a donor and partner in development, the United States has helped make a difference internationally in educational access and quality over the past ten years. While facing some of the same educational challenges confronting other nations, it has created innovative solutions to challenges such as dealing equitably with multicultural and disadvantaged populations, extending learning beyond classroom walls, and accommodating supplementary and alternative learning systems and funding mechanisms. The United States has shared many of its experiences and lessons learned with nations worldwide and has supplied funding and technical assistance to help improve school systems and to support other learning opportunities.

This section highlights some of the diverse assistance the United States has provided to help others meet EFA goals. Interventions such as interactive radio instruction, out-of-school learning centers, community-participation activities, and bilingual and girls' education programs are components of U.S. assistance programs that have helped, and are continuing to help, make a difference in learning achievement.

U.S. Government

The U.S. Government provides assistance to primary, secondary, and adult basic education and early childhood development activities internationally through the U. S. Agency for International Development (USAID), the U.S. Department of State, the U.S. Department of Education, and the Peace Corps.

For much of the 1990s, USAID did not include education as one if its specific strategic goals. However, in 1997, realizing that a more pointed emphasis on edu-

cation was necessary, USAID revised its strategic plan and gave prominent attention to its new goal: human capacity built through education and training.

In 1990, when the world's attention was focused on EFA, annual global expenditures on education totaled approximately $800 billion. Of this, approximately $100 billion—13 percent—was spent in developing countries, where more than three-quarters of the world's children lived. Of that amount, approximately $115 million came from the USAID budget.[111]

Since 1990, the USAID cumulative contribution to basic education has been more than $1.3 billion, exclusive of additional funds for adult literacy and work force training. That makes USAID the major U.S. contributor, by far, to improving education in the developing world. As Table 3 shows, after reaching a peak in FY95, the funding leveled off and has remained relatively stable. By the end of FY00, when funds from various sources—Child Survival and Diseases, Economic Support, and Development Assistance—are combined, the available aid for basic education is expected to be more than $130 million.

Despite the fact that basic education funding has been maintained at approximately the same level for five years, this investment is insufficient to meet EFA goals. Nonetheless, the U.S. contribution over ten years has been substantial in many respects. For example, the expenditures have been grants, not loans, to the recipients, and they have been mainly for non-recurrent costs in recipients' budgets, thus

Table 3: USAID Basic Education Obligations by Fiscal Year
(in US$million)

	FY90	FY93	FY95	FY97	FY98 (est.)	FY99 (est.)	TOTAL
Africa	32.2	92.7	77.5	74.0	69.1	66.6	$412.1
Asia-Near East	42.7	13.4	20.8	21.6	21.5	17.1	137.1
Europe-NIS	0.0	0.0	1.6	0.5	0.6	0.0	2.7
Latin America-Caribbean	28.8	21.3	28.2	22.9	31.0	37.2	170.0
Global	3.8	5.5	10.9	6.0	4.9	6.9	40.3
Bureau for Humanitarian Relief	5.7	0.9	2.2	1.1	1.5	0.9	12.3
Policy and Program Coordination	0.4	0.5	0.8	0.6	0.0	0.0	2.3
TOTAL	114.7	134.5	142.0	127.9	128.7	128.9	$776.7

Source: USAID

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allowing for the introduction of new activities to improve access and quality. The investment has fostered innovation whenever possible rather than support to the status quo.

The bulk of the spending on basic education for the past decade has been on education for children. Of the $127.9 million in 1997 for basic education in three regions—Africa, Latin America and the Caribbean, and Asia and the Near East—USAID allocated 96 percent to basic education for children and the remainder to adult literacy programs.[112]

The geographic focus of the spending has shifted over the last ten years. At present, USAID devotes approximately 60 percent of its basic education budget to nine countries in Africa. That proportion is twice as much as in 1990, when the Asia-Near East region commanded the highest USAID budget allocation for basic education. In 1999, the Asia-Near East region is receiving less than one-quarter of that amount. The budget for the Latin America-Caribbean region has fluctuated between $21 million and $37 million (FY99) during this period.

The United States also provides funding to U.S., UN, multilateral, and other agencies that support international basic education programs. These include UNICEF, the World Bank, the African Development Fund, the Asian Development Bank, and the Inter-American Development Bank.

The fiscal 2000 budget, approved by Congress in November 1999, provides for $123 million of the $370 million President Clinton requested to ease the burden of poor, heavily indebted developing countries. The U.S. education community hopes that at least half of these funds will be added to the basic education budget. The Peace Corps received funds to maintain its current level of volunteers but none for expansion.[113]

Non-governmental organizations and foundations

In addition to U.S. Government funding, private voluntary organizations (PVOs) and non-governmental organizations (NGOs), foundations, and corporations fund education programs in the developing world, although, in many cases, the financial data are not readily accessible.

Foundation funding priorities for international grants changed for the better in the 1990s from those of the preceding decade, although the international share of the total foundation budget remained low—in the 3 to 4 percent range. As Table 4 shows, the bulk of the educational funding went to higher education and graduate/professional education, although elementary and secondary education also benefited.[114]

Table 4: Foundation Funding for Elementary and Secondary Education

Year	Amount	%	Number of Grants
1990	$1,625,123	0.3	44
1994	$5,831,076	0.9	99

Source: The Foundation Center

The W.K. Kellogg Foundation, Ford Foundation, Andrew W. Mellon Foundation, Carnegie Corporation of New York, and the Rockefeller Foundation are four of the largest international funders in the United States.

Partner organizations

While government funding has made the major part of U.S. international development possible, NGOs and PVOs, other non-profit and for-profit organizations, research institutions, and universities have contributed significantly to many successful international education programs. These organizations have carried out their work in partnership with host countries and, frequently, with the U.S. government. They have fostered numerous successful innovations, including student-centered classroom methodologies, peer teaching, teacher mentoring, interactive radio instruction, low-cost indigenous instructional materials, school clusters, and community learning centers. U.S. partner organizations have also been influential in furthering participatory educational policy reform and helping to develop management information systems.

Partner Organizations Active in Basic Education Programs in the 1990s

Academy for Educational Development
American Institutes for Research
Aurora Associates
Creative Associates International
Education Development Center
Juarez & Associates
The Mitchell Group
Research Triangle Institute
World Education
World Learning
Florida State University
Harvard Institute for International Development
Michigan State University
Ohio University
University of Massachusetts
University of Pittsburgh

The accompanying box shows organizations and universities active in education assistance programs during the 1990s. In many instances, they have formed solid partnerships with developing world NGOs to carry out educational programs.

2. Interests and Contributions of U.S. Donors and their Partner Organizations

Basic education directions of U.S. donors and partner organizations post-1990

The 1990s marked a change from the preceding decade in the focus of educational assistance. The hallmark of the 1980s was nonformal education and the role of education in other sectoral and multisectoral programs. As the 1980s drew to a close, however, there was a resurgence of support for formal education, training, and human resources initiatives throughout the world.

In the United States, broad-based support for improving the quality of education and training was fueled, in large part, by widespread concern about future competitiveness in the global economy and about the needs of "at-risk" youth in U.S. inner cities. As already underlined, the 1989 Education Summit, convened by the White House and the National Governors' Association, established goals for the nation's schools and highlighted the public's mandate for improved education and training.

USAID was at the forefront of a similar movement gaining momentum in the developing world. In FY88, Congress instructed USAID to spend 50 percent of its education and human resource development funds on basic education and to initiate eight new projects within the next three fiscal years, with a geographic emphasis on Africa and South Asia.[115] Subsequently, USAID and U.S. non-governmental organizations participated in the World Conference on Education for All in March 1990 and roundly supported its goals and its reaffirmation of global support for meeting basic learning needs of all people so that they might participate fully in economic development. The goals for universal primary education that evolved from the EFA conference coincided with many of those furthered by U.S. donors and their partners in their work preceding the conference.

In the late 1980s, USAID's flagship education project, Advancing Basic Education and Literacy (ABEL), anticipated and documented many of the critical needs that Jomtien defined. The project engaged a consortium of the most experienced education organizations in the United States to work with other educators and donors worldwide to address illiteracy. The partners and their host country counterparts worked together on solving some of the critical problems inhibiting educational access, learning achievement, and adult literacy. They addressed the need for poli-

cy dialogue and high-level administrative reforms to create a climate favorable to basic education.

The ABEL project, which has continued through the 1990s, epitomized the major emphases of U.S. assistance programs of the decade: girls' education, policy reform, development of local capacity, and partnerships.

Girls' education

The push to enroll girls in school began before 1990, but Jomtien's call for universal education made nations increasingly aware of the discrepancy between boys' and girls' enrollments, the critical role girls play in economic and social progress, and, as a consequence, the pressing need to educate them. In 1990, it was estimated that 130 million children in the developing world had no access to education, nearly two-thirds of them girls.[116] The United States joined other nations and funding agencies in fighting to place and keep girls' education on the policy agendas of developing world governments. At the same time, in the United States education NGOs advocated strongly for preserving the funding levels of the U.S. foreign aid education budget, repeatedly citing the economic gains that accrue to nations that educate girls and women.

The ABEL project paid particular attention to educating girls throughout the entire decade. Project staff from Creative Associates International, the Academy for Educational Development, and the Education Development Center worked hand in hand with ministries of education, other educators, and communities around the world to research the issues surrounding girls' education, document the findings, produce and disseminate publications, and implement programs aimed at increasing access to education for all children, but especially for girls.

ABEL was followed by more programs in Africa, Asia, Latin America, and the Caribbean that addressed access to education and achievement of basic literacy for all children. The programs introduced innovations such as gender training for educators and communities, flexible school calendars compatible with girls' domestic responsibilities, and scholarships for girls. Boys benefited, too, when classrooms encouraged participation by all children and parents gave increased priority to all their children. In general, when resources are invested in girls' education, resources increase for boys also.

Policy reform

During the 1990s, support by USAID and its U.S. partner organizations helped advance education policy dialogue around the world to ensure that grassroots and other development efforts would become sustainable through strong, supportive policies at the level of national government.

With USAID funding, the Research Triangle Institute (RTI) and Academy for Educational Development developed a methodology to assist governments in education reform. Called education reform support, the process fosters the use of data in policy making and encourages the creation of networks and coalitions that support policy dialogue. This approach to educational reform has been employed successfully around the world. The Research Triangle Institute helped South Africa develop funding norms for educational finance, which were written into law in early 1998. At the invitation of the Open Society Institute and the host countries, RTI assisted Hungary and Bulgaria in developing a reform strategy for their educational systems. A training video, produced by the Education Development Center and Ugandan educators for use in Uganda, demonstrated the methodology for designing and implementing the education reform process. U.S. education policy specialists in Ecuador helped create a civil society consultative group of educational leaders that successfully lobbied policy makers to include education as a component of the country's new constitution. The group is now helping to draft a new education law.

A large component of U.S. assistance for policy reform has been improvement of national education management information systems. Such assistance has helped increase the accuracy, timeliness, and accessibility of data for basic education policy and program planning. For example, a computer program for data processing called ED*ASSIST, developed by the Academy for Educational Development with USAID funding, is being used by ministries of education in Latin America, Africa, and eastern Europe to improve education management. The ED*ASSIST approach has received additional support from the World Bank and the Inter-American Development Bank, building on the U.S. investment.

Development of local capacity

Over the past decade, U.S. donors and partner organizations have concentrated a significant part of their development efforts on building local capacity—in educational institutions, NGOs, and communities to improve the quality of education and increase the likelihood of sustained program impact. Most programs today supported with U.S. funds include some form of training to build local capacity.

The range of capacity-building assistance is wide. In Haiti, for example, a local organization received assistance for implementing its management and finance systems and for developing and evaluating distance education/radio programs for reading, mathematics, and teacher education. In Haiti, Africa, eastern Europe, and the New Independent States of the former Soviet Union, researchers trained by U.S. educators have, in turn, trained staff of institutions in their countries in data collection and analysis and in classroom observation techniques.

Other donors have helped extend USAID's investment in Uganda. For six years, U.S. organizations have been helping to strengthen the capacity of Ugandan educators, educational institutions, and communities. The success of this work encouraged two European nations to build on it. The Government of Ireland, working with the Academy for Educational Development, extended educational assistance to the northern part of Uganda not reached by earlier efforts. The Government of the Netherlands funded distribution of additional instructional materials nationwide.

Enabling local communities to become active in basic education activities has had a major impact on educational reform. Throughout Africa, Asia, and Latin America, communities and parents, frequently with U.S. assistance, are developing skills that enable them to participate in the education of their children. In Ethiopia, Ghana, Guinea, Mali, and Malawi, for example, committees of parents, teachers, and community leaders are evaluating and addressing the needs of their schools. In Mali and Malawi, with USAID funding, a U.S. private voluntary organization actively promoted community-school partnerships to establish schools in remote areas where none existed.[117] In Pakistan, village education committees composed of parents have been trained to interact with the provincial government to create and maintain girls' schools, identify local female teachers to teach girls, see that the teachers receive training, and monitor teachers' attendance and teaching.[118] Worldwide, girls are probably the greatest beneficiary of community efforts to improve schools.

UNESCO has attested to the significance of community involvement:

> Countries where the [educational reform] process has been relatively successful are those that obtained a determined commitment from local communities, parents and teachers, backed up by a continuing dialogue and various forms of financial, technical and/or vocational assistance. It is obvious that the local community plays a paramount role in any successful reform strategy.[119]

Partnerships

The 1990s saw a burgeoning emphasis on partnerships with and among international donors, the public and private sectors, universities, local and international NGOs, the media, and community groups. The reasons for the new partnerships are varied but include the recognition that (1) the world is becoming increasingly interdependent; (2) the pooling of resources is essential to ease financial and time constraints on governments bearing total responsibility for education; and (3) the private sector and local NGOs in particular can contribute significantly to education.

The Jomtien and Beijing conferences helped fuel the debate about the role of NGOs, causing governments and NGOs to assess their relationships with each other. Whereas in the 1980s most NGOs served as a critical voice and watchdog of the government and multilateral donors, in the 1990s they began working as partners and receiving funding from them. Such partnerships, as USAID points out, are "increasingly providing social services once assumed to be exclusive functions of the state."[120]

Local partnerships show promise for lasting improvements for girls' education and the larger benefits to society associated with those improvements. In Balochistan, Pakistan, for example, a local education NGO was an outgrowth of efforts that originally entailed USAID, the World Bank, and UNICEF, an informal donor partnership aimed at improving basic education. The NGO mobilizes communities to overcome constraints to girls' education.

An international conference on girls' education, sponsored by USAID, has inspired the private sector in Morocco to help change the enrollment imbalance between boys and girls in primary school: only 48 percent of girls are enrolled, compared with 70 percent of boys. Literacy rates for women are only slightly more than half those for men. Leaders in the banking sector developed a program of matching local branches of a major financial institution with local schools that encourages clients of the branches to join school support boards and provide managerial, organizational, and financial assistance to the schools.

In Guatemala, a foundation of the Coffee Grower's Association administers a national scholarship program for girls in rural areas to stem high dropout rates. Parent committees in participating communities distribute the scholarships, which are funded by the ministry of education. The successful collaboration between the ministry and the private sector has led the government to increase its investment in the program, from 6,211 scholarships in 1996 to a planned 60,000 in 2000. The partnership program, originally catalyzed by USAID assistance, now functions on its own.[121]

Table 5 depicts the types of partners—businesses, regional and grassroots NGOs, community groups, donor organizations, and governments— that frequently participate in education programs, the typical roles they play, and the benefits they receive from such assistance.

Table 5: Stakeholder Roles and Benefits

Partner Types	Roles	Benefits
Businesses	**Infrastructure Contributions**	
	Provide equipment for communities to build latrines for girls	More educated girls lead to a higher pool of skilled labor for the workforce
	Assist with funding and constructing safe housing to attract women teachers	Positive publicity
	Build roads to ensure that girls get to school safely, or build boundary walls when security is an issue	Helps traditional business shed inaccurate and often unrecognized assumptions about NGOs and become more creative
	Technical Assistance	Sets a model for new partnerships with government
	Provide girls' education NGOS with technology and communications support and with employee volunteers	Tax breaks
	Financial Contributions	
	Contribute in-kind donations	
	Offer financial, administrative, and technical resources	
	Provide uniforms, school supplies, and other school resources	
	Establish and contribute to scholarship program for girls	
Regional NGOs and Other Intermediaries	**Technical Assistance**	Opportunities to be active players in education projects
	Stimulate and provide resources for Institutional change and organizational development	Positive publicity
	Provide technical expertise for NGOs	
	Facilitate partnership process	
	Organizational contributions	
	Organize community constituencies	
	Help build consensus among member groups	
	Create forums of contact through projects and events	
Grassroots NGOs and Community Groups	**Organizational Contributions**	
	Solicit community volunteers	Direct work with businesses gives opportunity to influence or reform private sector activities more effectively

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	Tap knowledge of local communities and issues	Direct technical and financial support from partners
	Mobilize people in communities	
	Implement projects	
Donor Organizations	**Financial Contributions**	Positive publicity
	Provide school funding and other resources, such as school uniforms, supplies, and computers	Concrete donor achievement records
	Engage in policy dialogue	
Governments	**Legal Initiatives**	Increases in girls' education correlated with a healthier population and with long-term economic growth and stability
	Create laws and policies supporting girls' education projects	
	Financial contributions	Respect from constituencies
	Reallocate national budget for increased education funding	
	Provide school fee waivers/vouchers for school supplies	

Source: U.S. Agency for International Development, Office of Women in Development, 1999, *Educational Partnerships for Girls' Development Successes*, Gender Matters, No. 2.

3. Overview of U.S. International Assistance in Areas Supportive of EFA Goals

Since Jomtien, the United States has contributed funds and technical assistance aimed at the six EFA "target dimensions" for setting goals and measuring progress toward education for all.

1. Expansion of early childhood care and development

Fifteen years ago, very few donor organizations saw the importance of early childhood programs. However, scientific research and dissemination of the findings during the 1990s about development of intelligence and social behavior and the importance of a child's early years spurred attention to early childhood care and

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development. Today early childhood care and development fall within the official mandate of many of the major donors, international NGOs, and foundations.

As the World Bank observes, early childhood education "can increase the return on primary and secondary school investments. It can raise participants' productivity and income levels and reduce public expenditures. It can also reduce social costs in such areas as school repetition, juvenile delinquency, and drug use."[122] Girls who participate in early childhood education programs are more likely than not to enroll and continue in school.

For most of this decade, U.S. organizations have actively supported international early childhood care and development forums. The Consultative Group on Early Childhood Care and Development has provided one mechanism for such support and participation. Founded in 1984, it is an international, interagency group dedicated to improving the condition of young children at risk and keeping them on the agenda of policy makers, funding agencies, and program developers worldwide. The Consultative Group gathers and disseminates knowledge about early childhood care and development and advocates for it. It was successful in influencing the EFA platform, which considers early childhood care and development one of the four pillars of basic learning.

U.S. members of the Consultative Group have included the Academy for Educational Development, the American Health Foundation, the Carnegie Corporation, Christian Children's Fund, Education Development Center, the Ford Foundation, High/Scope Educational Research Foundation, the Rockefeller Foundation, Save the Children USA, and USAID.

NGOs such as Save the Children and CARE have been the major U.S. players in international early childhood care and education in the 1990s. While not a major donor, USAID nonetheless has funded the Consultative Group, certain early childhood programs in developing countries, and a regional network for early childhood development in Latin America and the Caribbean, and in various ways it has supported the work of other donors. Even before the 1990s, the United States was active in early childhood activities. In 1985, for example, USAID funded an evaluation of a community-based early childhood program in Peru that found that children who participated in the program were socially and intellectually more prepared for primary school than a comparison group of similar children who had not participated.[123] The findings helped set the stage for the later interest and work of USAID.

Since the early 1990s, USAID and its partner organizations have advocated strongly for early childhood programs. They produced research and publications to inform policy makers and others about the advantages and outcomes of early childhood programs; they evaluated the impact of programs designed to promote learning and encourage democratic behaviors; they designed an interactive radio

program to engage young children in active play and to train caregivers with low literacy levels; and they are exploring early child-rearing and instructional practices used by parents and preschool centers in rural communities in Latin America to identify behaviors and attitudes most positively associated with learning.

2. Universal access to, and completion of, primary/basic education

Years of experience helping developing world governments address their education challenges have afforded U.S. donors and partner organizations considerable information about what works in education reform programs. Enrollment and continued persistence in primary school depend on many factors. Among the most significant are availability of schools and teachers, quality of instruction and presence of textbooks and other instructional materials, and willingness of parents to enroll children, especially girls, in school.

The United States is committed to the goal of full primary enrollment. It considers a country on track if the "primary school enrollment ratio is increasing at a rate fast enough to reach full enrollment by 2015, *if that rate is sustained.*"[124] El Salvador and Malawi are among the USAID-assisted countries worldwide that show promising enrollment trends. Malawi's enrollment increase, from 55 to 96 percent between 1991 and 1997, resulted in good part from the decree of the new democratic government, which came to power in 1994, espousing free primary schooling for all children. That decision nearly doubled enrollment overnight.

While Pakistan no longer receives U.S. aid, it was a recipient earlier in the 1990s. Its considerable progress in girls' enrollment in certain areas of the country is worth noting.

Other basic education programs around the world are also having an impact on access to education. Multiple efforts in Guatemala for the past ten years by USAID and partner organizations have contributed to increased enrollment for girls. With help from CARE's community schools programs in Africa, thousands of children, both boys and girls, are now in school. In Albania, Save the Children has set up education programs in camps and community centers for 40,000 to 60,000 Kosova refugee children.

3. Improvement in learning achievement

The measurement of learning gains is of critical importance to numerous stakeholders: students, parents, teachers, policy makers, and donors. Examinations and national assessments convey powerful messages about what knowledge and skills are important and how they should be taught. The results of tests determine decisions

El Salvador: Educational Access and Quality

For seven years, from 1991 to 1998, El Salvador concentrated much of its efforts on a comprehensive educational reform to offset the setbacks of a devastating 12-year civil conflict. The SABE project (Strengthening Achievement in Basic Education) was the main vehicle for the basic education activities, and it produced significant gains in access to basic education and quality. The Academy for Educational Development was the major implementing organization, using USAID funding.

SABE addressed the literacy and numeracy deficiencies of children in grades K-6 and introduced ideas, materials, and practices to promote child-centered learning. The project improved the quality of education through a comprehensive approach to the educational system. Project staff and their Ministry-of-Education colleagues designed interventions to improve educational services. They revised and validated curriculum and introduced children to useful knowledge about civics, health and nutrition, environmental matters, science, and social studies. They assessed learning and developed standardized tests, created educational materials, and trained in-service teachers. SABE staff and the ministry also designed interventions to improve educational administration. They strengthened the ministry's supervisory capacity, decentralized the education system, and promoted community involvement in education.

SABE paid particular attention to the "ex-conflictive" zones, approximately 40 percent of El Salvador, to compensate for years of educational deprivation. Project staff and their El Salvadoran colleagues ensured that schools in those regions received supplemental textbooks and school supplies; teachers who lacked formal education received academic training; and programs were available to address the trauma of children exposed to war. Community members were trained to recognize or treat the symptoms of anti-social behavior.

In addition to creating fundamental changes in teacher-student classroom interactions, the SABE project leaves behind a substantial network of model schools that now serve as one of the ministry's primary means of conducting in-service teacher training. Through the model schools programs, teachers can turn to other teachers in their own school districts for guidance and training in a decentralized technical approach that ensures that training is adapted to local realities.

about promotion to higher grades, certification granted to graduating students, and selection of students for higher levels of education. For policy makers, tests are a policy tool to improve teaching and learning. A well-designed testing system offers policy makers opportunities to concentrate on what should be learned and why, how it should be learned, and how to improve learning. As one international assessment specialist has observed, such a system can be "one of the most powerful points of leverage a policymaker has to improve the quality of education in a nation's schools."[125]

Malawi: Girls' education

The focus on girls' education in Malawi, with considerable support from the government of Malawi, multiple donors, and partner organizations, is paying off. Recent statistics indicate rising numbers and proportions of girls in school at both the primary and secondary levels. Girls' enrollment in primary school rose from 39 percent of total students in 1992 to 48 percent in 1998. In 1991, only 52.4 percent of school-age girls were enrolled; in 2000, that proportion is expected to reach 87 percent.[126]

The government's Free Primary Education decree in 1994 and an aggressive campaign by the Ministry of Education were responsible for major enrollment increases. But while access soared, quality suffered: pupil-teacher ratios rose to 77 to 1, classes often had to be held in makeshift shelters, children in the lower grades were assigned the least qualified teachers, and grade repetition increased. [127]

Multilateral and bilateral donors joined the ministry to improve teacher education, support community schools, and increase textbook production. USAID pledged US $25.5 million to improve the quality and efficiency of education, with a focus on girls. This amount was in addition to a commitment of $20 million to basic education and girls' education in a program that began in 1991. [128]

Some of the improvements in access and gender equity, in particular, are a result of assistance by the Girls' Attainment in Basic Literacy and Education (GABEL) project and the Social Mobilization Campaign, a partnership of the government of Malawi, USAID, Creative Associates International, Inc., Save the Children Federation, and local Malawian NGOs and firms.

The social mobilization campaign was a national effort to change attitudes about the importance of girls' education. Campaign staff worked with village organizations to change behavior in villages. In addition, Malawi university theater students created and produced theater for development, also known as participatory drama or popular theater, to prompt the audience to explore ways to alleviate constraints to girls' education—for example, offering ox carts to transport children to school or getting parents to divide household chores among sons and daughters so each has an equal chance to attend school. [129]

Testing has assumed increasing importance worldwide as education competes with other sectors for scarce public resources.[130] USAID and its partner organizations have assisted other nations with learning assessment in a number of ways: dissemination worldwide of research findings and other publications on learning assessment; assistance for development of test item banks for primary school examinations; and training of assessment coordinators. For example, in Jamaica, where the primary school assessment coordinators were trained and assistance provided for improving mathematics teaching, the Government of Jamaica continued assessment activities when USAID assistance ended. From 1996 through 1997, the average performance of 3rd grade students on standardized math tests increased by 4 percent, thus reversing a steady ten-year decline in national indicators of education performance.[131]

Pakistan: Access and Literacy in Balochistan

One major goal of the Primary Education Development project in Pakistan was to increase access, equity, and quality of primary education for all children, but especially for girls.

In 1989, USAID and its U.S. partner organizations—the Academy for Educational Development, Creative Associates International, Florida State University, and the Harvard Institute for International Development—began working with Pakistani counterparts in Balochistan and the Northwest Frontier Province (NWFP) to address serious educational problems: the literacy rate among rural women was 1.8 percent in Balochistan and 3.8 percent in NWFP. Fourteen percent of girls and 70 percent of boys in Balochistan and 28 percent of girls and 79 percent of boys in NWFP were enrolled in school.

When the U.S. government suspended foreign aid to Pakistan, and USAID withdrew five years into a ten-year project, there were 2,100 new girls' schools. Primary enrollments for girls had increased 30 percent in Balochistan and 70 percent in NWFP. Boys' enrollments likewise increased, by 13 percent in NWFP and 9 percent in Balochistan. New donors, working with the American non-governmental partners, continued the work begun by USAID. By 1996, girls' enrollments had more than tripled in Balochistan and more than doubled in NWFP. A recently ended effort of the Government of the Netherlands, also with the Academy for Educational Development, established 360 new schools for 15,000 rural girls aged 5-11.[132]

Certain other programs stand out for their innovative approaches to teacher support, governance, and curriculum to improve quality and, therefore, learning outcomes. In Uganda, for example, four USAID partner organizations—the Academy for Educational Development, Creative Associates International, the Research Triangle Institute, and the University of Massachusetts—collaborated with the Ugandan government to decentralize support for teachers to the district level. A system of cluster schools, resource centers, and tutors, one result of the decentralization, is considered highly successful by the Ugandan and U.S. governments for having improved teaching and learning. A girls' education program in Egypt, also with support from USAID, encourages active learning in the classroom. Children work in groups, not rows, and are encouraged to search resource materials for answers to their questions. Another program, GreenCOM, introduces environmental issues into the curriculum worldwide.

One large worldwide program is dedicated entirely to quality issues. Improving Education Quality, as the program is called, generates knowledge about classroom realities for teachers and students and helps countries monitor and evaluate educational results. Programs in Guinea, Malawi, and Uganda, for example, have dealt with textbook issues, student proficiency in mathematics and language studies, and the research capacity of teachers and community members. The American Institutes for Research, with its U.S. partners—Juarez and Associates, the Academy for Educational Development, the Education Development Center, and the University of Pittsburgh—implement the program.

Guatemala: Comprehensive Systemic Reform

Assessment was one element of Guatemala's comprehensive approach to improving the quality of education, particularly for students in rural areas. In a ten-year program that spanned the decade, the Ministry of Education, with USAID funding and implementation assistance from the Academy for Educational Development and Juarez and Associates, addressed issues of bilingual education, girls' education, and in-service teacher education.

The program supported research and development on alternative instructional approaches, including radio math and Spanish, achievement testing, and a new school model. The project also addressed systemwide issues through assistance to the management information system and policy development.

Two impressive results of the project were the Guatemalan government's decisions to nearly double its funding for basic education and to expand the project. The government also issued textbooks free from gender stereotypes, free to all primary schools. Other donors improved their support for girls' education issues.

4. Reduction of adult illiteracy rate, especially gender disparities

The World Declaration on Education for All affirmed the right of adults to have access to education: "Every person—child, youth and adult—shall be able to benefit from educational opportunities designed to meet their basic learning needs." The EFA *Framework for Action* further emphasized the need to improve female literacy, since 70 percent of the world's illiterate population are women.

The United States has worked in partnership with others around the world to combat adult illiteracy. In South Africa, for example, USAID and its U.S. partners developed adult learning materials that are now being used in two provinces. They also developed unit standards for an adult education program in agriculture and small and medium enterprise development. In Mozambique, Save the Children established centers to provide basic literacy training for adults, primarily women. In Haiti, more than 1,800 women have taken Save the Children's adult literacy classes, which include basic reading and writing, advanced reading, basic numeracy, and functional literacy. Lessons include discussions about health, education, and money management.

Nepal has conducted adult literacy programs for more than 20 years, with extensive Ministry-of-Education support, funding from international donors, and implementation assistance from U.S. organizations. One U.S.-assisted family literacy program enables mothers to keep track of their children's illnesses, immunizations, and stages of development. Another combines literacy, health, and family planning. A third focuses on literacy, finances, and women's empowerment. As the accompanying box demonstrates, the results of such programs are becoming evident.

"I want to be able to read the names of the gods before I die."

-A Nepalese woman explaining why she wanted to learn to read.

5. Expansion of basic education and training in other essential skills

The foregoing discussion suggests that some assistance programs take an integrated approach—that is, they combine basic literacy and learning with raised awareness about other aspects of life, such as health and reproduction. This approach to giving people practical and life skills is becoming a more common element of basic education programs than before. It is now understood that adult literacy programs work best if they are tied to practical skills or knowledge that one needs to be a productive citizen or family member. Literacy is attained and retained better under those conditions.

U.S.-assisted programs in Latin America, Africa, and Asia have introduced practical skills into programs for both children and adults. In Mali and Egypt, for example, U.S. organizations have helped develop a life skills curriculum for the schools. In Honduras, a radio program integrated literacy and encouragement toward democracy as it informed adults about their legal rights and responsibility to vote.

6. Increased acquisition of knowledge, skills, and values for better living

Multiple learning channels are helping to meet the needs of diverse populations and to ensure that people are able to acquire knowledge throughout life. Such channels range from newspapers and educational theater to radios, computers, and community learning centers. The phrases "model of use" or "model of application" are often used to describe a combination of information and educational

Nepal: Literacy Programs

Nepal's literacy programs have helped increase the literacy rate for women and out-of-school adolescent girls. In four years, from 1991 to 1996, the literacy rate in some districts rose from 22 percent to 28 percent. In 1997, more than 100,000 women learned to read, write, and count. The most notable outcome of the literacy training, perhaps, is the world of practical skills it opened up and the improved quality of life it created for the participants.

This was not just literacy for literacy's sake. One USAID-funded program, for example, offered micro-enterprise training and a women's legal rights curriculum. An evaluation of the various programs noted changes in the behaviors and attitudes of the newly literate women. In some instances, they were more politically aware, had more self-confidence and mobility and participated more in groups outside their families, had greater control over their family income, and were able to envision a different future for themselves and their children.[133]

technologies that increase the impact of basic education systems within and outside school settings.

Many efforts in this regard have been underway throughout the 1990s. U.S. organizations tested the effectiveness of multichannel distance education in improving instructional quality in Haitian primary schools, assisted Lesotho and South Africa with radio English programs in the early grades, expanded Nepal's teacher education outreach through radio programs, and provided radio math and health assistance to Bolivia. Innovative programs are underway, as the following boxes indicate, in Morocco, Ghana, and Paraguay to equip young people and adults for a global society and lifelong learning.

Morocco: Skills for a Global Economy

Morocco's Ministry of National Education has announced a bold initiative—to introduce computers throughout the country's education system by 2008. The ultimate goal is to equip students with the knowledge and skills necessary to compete in the global economy. The urgency is great, therefore, for teacher training programs that will enable teachers to prepare students for using computers in the classroom. Furthermore, the difficulty of providing in-service training for thousands of teachers, even without the new technology imperative, points to the need for alternatives to traditional training programs. Certain innovative activities aimed at making a difference are already underway, some with assistance from USAID.

A low-cost technology project with Morocco's teacher training institutes is creating a dynamic learning environment for teachers, trainers, inspectors, and other ministry staff. It fosters "horizontal" building of teaching capacity by linking participants in five provinces with each other via computer networks in which they exchange learning materials and information about their practices and experiences. The asynchronous—that is, non-time-dependent—approach allows the learners to send and receive information at their convenience.

The Web site will also offer the opportunity for teachers and other participants to communicate with experts abroad, exchanging ideas and instructional materials and discussing educational issues of mutual interest. School-to-school programs are likewise a distinct possibility.

The project is developing distance learning courses for pre-service and in-service professional development. It is also supporting a ministry-level plan for "master information teachers"—that is, "ambassadors of technology"—who will champion the use of learning technologies and support teachers who are uncomfortable with computers or information technology in general.

Ghana: Lifelong Learning

A project in Ghana is facing head-on the challenges of lifelong learning and non-traditional access to education and with USAID assistance is developing a creative solution to the problems. The project is establishing community learning centers to enhance basic education, train teachers, develop local businesses, strengthen municipal administration and civil society organizations, and provide health care information.

Ultimately, the centers will provide learning system services to a variety of organizations, companies, and individuals throughout the country: Community and NGO leaders, service providers in a variety of fields, educators and students, and businesses, all of whom will not only have new access to computer technologies but will receive training in their use.

The community learning centers build on the telecenter concept but emphasize the learning functions of the communication technologies. Three Ghanain NGOs house the centers to ensure broad public access and preserve the learning focus. The NGO staff have been trained in computer literacy, Internet orientation, word processing, spreadsheets, presentation graphics, Web site development, and training methodologies, to cite just some of the areas. The NGOs, in turn, offer similar training opportunities to the public.

Paraguay: Community Learning Centers

In Asunción, Paraguay, the community learning center project, also funded by USAID, developed a mind of its own. What began as a plan for municipal telecenters to automate activities, such as registering to vote, paying bills, applying for licenses and permits, and accessing information about business development and civic education, has grown to include an educational focus. Teachers take students to explore the science and geography CD-ROMS available at the centers, and some students are using the Internet to conduct research for class presentations. At one center, as many as 360 children a week use the center's electronic capabilities to improve their reading, writing, math, and basic computer skills.

Two centers, located in primary schools, benefit students and teachers as well as the entire community. At one school, teachers, parents, and students designed their own computer training sessions and took up collections to buy educational software. They collaborate with the community to ensure that everyone who wishes it has access to the center after school hours. The second center has scheduled hours of operations to extend availability to the entire community.

4. Challenges/Areas for Continuing U.S. Assistance

As the 20th century concludes, nations and funding agencies are considering the role education should play in preparing people to be productive citizens of the next century. In doing so, they face challenges posed by those who support continuity rather than the innovations necessary to supplement existing educational systems and meet the needs of people in a fast-changing world.

Voices as diverse as UNESCO, UNICEF, Merrill Lynch, *The New York Times*, the U.S. Agency for International Development, and the World Bank have addressed aspects of the subject of assistance. Most agree on certain "givens." There is consensus that the gap must be reduced between the privileged minority who benefit from progress and the substantial majority who suffer from it, and that educational opportunities must be broadened to ensure educational equality. They agree that, given technological and scientific advances and the increasing importance of knowledge, the creation of a "learning society" is critical. Consensus also exists that early childhood care and development and lifelong learning must be given more prominence on educational policy agendas and that new players must participate in the education process. Learning to live in a global village while maintaining individual and cultural identities will become a greater challenge.

While long agendas vie for limited educational funding, one cannot lose sight of what UNESCO points out:

> The basis for a learning society is a formal education system, where each individual is introduced to the many different forms of knowledge. There is no substitute for the teacher-pupil relationship. . . .[134]

EFA's emphasis on universal primary education and basic learning needs, as defined in the 1990 *Framework for Action to Meet Basic Learning Needs* and reiterated in the 1999 revised draft framework, is well placed. In the early educational stages, therefore, emphasis must remain on the basics—literacy, numeracy, problem solving—met through programs that stress quality, teacher preparation, and assessment. With a solid educational base created in the early years, people will be prepared to continue learning as adults outside classroom walls.

For nations to be prepared for the world of 2015, however, the definition of "basic" learning and its time frame must expand. We now know that learning begins at birth, that it is intense during the preschool years, and that it must continue throughout life if individuals and nations are to be productive and technologically skilled in a global economy.

A "holistic structure of knowledge and skills" is, therefore, necessary, as Haddad has noted:

> The diversified economic, social, and political demands on education leave countries with no choice but to invest in building the whole structure of knowledge and skills. With such profound changes in technology and the economy, a country forgoes the opportunity for advancement when it focuses on one level to the disadvantage of others. The workforce of the future will need a whole spectrum of knowledge and skills to deal with technology and the globalization of knowledge. It will also need to be agile and flexible, to adjust to continuous change, both economic and social. This means that countries must embrace a holistic approach to education, investing in building the whole pyramid of knowledge and skills concurrently. Each level in the structure has its own importance, and one cannot be traded for another. . . In some countries, the pyramid has been rather thin, but the way to broaden the base is not to truncate the top. A proportionate fattening of the pyramid is probably the most balanced approach.[135]

The following section notes challenges to basic education that lie ahead and points out some of the shortcomings of the United States that must be addressed if it is to be effective in assisting others. Dwindling foreign assistance funds for education is one major concern. The section also elaborates on areas in which the United States has a deep interest and in which it welcomes opportunities to partner with other donors and organizations to address the challenges.

Equity

Educational equity means access to learning opportunities in school and outside for all people, including disenfranchised and disadvantaged populations, the most common of which are girls and women, ethnic minorities, and people with disabilities. In grappling with equity challenges at home, the United States continues to learn from rich, public debate on the issues. For the past ten years, U.S. assistance programs abroad have incorporated lessons learned from those debates, which air the opinions of diverse groups.

Gender gap. At a Steering Committee meeting in Paris in October 1999, the EFA Forum Secretariat presented a new action plan for education in the 21st century. The plan includes the gender gap as one of five themes. Shortly thereafter, as the fifth anniversary of the United Nations Fourth World Conference on Women approached and the United Nations anticipated the special session of the General Assembly in June 2000, *Beijing Plus Five*, the United States sponsored *Women 2000-Beijing Plus Five*. The conference highlighted the fact that gender equity remains a continuing concern around the world.

The attention to the gender gap, since Jomtien, is beginning to pay off, although much remains to be accomplished. Gender gaps remain particularly large in much of sub-Saharan Africa and in many countries in Asia and the Near East. In Asia,

the financial crisis of the late 1990s is expected to slow regional progress toward gender equality over the next few years.

A strong women's movement in the United States has attracted the attention of the general population to inequities in the classroom as well as elsewhere—for example, curriculums insensitive to gender, teaching methodologies that favor boys over girls, or standardized tests with questions that put girls at a disadvantage. Drawing on lessons learned, U.S. international assistance programs have been able to introduce gender-sensitive reform elements that, in many instances, are showing success. Gender equity is decidedly a field in which the United States wishes to continue partnering with others to eliminate discriminatory educational practices.

Ethnic minorities. Indian populations of Latin America, tribal groups outside the mainstream in Africa, and political and economic immigrants within Asia are but three types of ethnic minorities disadvantaged by educational systems that discriminate because of language or nationality. Even when discrimination is not the driving force, the financial cost to a country of accommodating such additions to the educational system as diverse languages of instruction and curriculum materials can be daunting. USAID has assisted worldwide with development of curriculum and instructional materials for bilingual programs. It has helped initiate interactive radio language arts programs for children who will switch from instruction in their mother tongues in the early grades to English in later grades. The U.S. experience with multicultural populations and second-language instructional programs within its own boundaries is one that can be shared internationally.

People with disabilities. UNESCO estimates that only 2 percent of approximately 120 to 150 million children with disabilities worldwide are in school, and the World Health Organization estimates that only 5 percent receive any schooling or rehabilitation.[136] Everyone loses when millions of children are denied the opportunity to reach their full potential and contribute to, and participate fully in, society.

In some countries, the disabled population is nearly 20 percent of the total population because of inadequate medical services, violence and conflict, and natural and other disasters.[137] Women and girls with disabilities in particular are under-served.

With such a small proportion of children with disabilities receiving education, it is clear that there is still a long way to go before reaching the goal of an all-inclusive society with equal access to services. USAID and other donors have placed the disabilities issue on the global agenda. There are now some examples of donor agencies and international and grassroots non-profit organizations working in partnership to improve the accessibility of education for persons with disabilities. Nonetheless, vast inequities remain. The United States has made considerable strides domestically in this field, supported by legislation, and can bring some of that experience to bear on its work internationally.

Educational quality

The Declaration on Education for All emphasized learning in addition to access: "The focus of basic education must. . .be on actual learning acquisition and outcome, rather than exclusively upon enrolment. . . .It is therefore necessary to define acceptable levels of learning acquisition for educational programs and to improve and apply systems of assessing learning achievement."

The educational systems of many countries are geared to the needs of well-off, urban children at the expense of poor children, those less prepared to learn, and those in rural areas. As a result, many children do not succeed in the early grades: they repeat and eventually drop out. Improving educational quality for them, and for all children, must be on the policy agendas of all countries.

The United States has dedicated foreign assistance funds to improving educational quality over the past decade and is committed to continuing to do so. USAID and its partner organizations, working with host country governments and educators, can help governments identify constraints to educational quality. These include unrealistic expectations of early learning by poorly prepared children, outdated teaching methods, inappropriate use of tests, and poor teacher motivation often tied to poor educational management.[138]

At the start of the decade, educational policy stressed provision of educational access to meet goals such as education for all. Often teachers with minimum qualifications were recruited to meet the demands. But as early as 1993 the shift of policy focus from access to quality of education was apparent, and this led to a concentration on improving the quality of those teaching or planing to do so.[139] The policy decisions that Malawi and Uganda made to enroll all children in school called further attention to the need to accompany an emphasis on access with an emphasis on quality.

Furthermore, it was becoming increasingly evident that acquisition of learning included—in addition to literacy and numeracy—problem-solving and critical-thinking skills and diligent, creative work habits. As USAID has noted, personal, cultural, and social issues, and not economic change alone, are driving the rethinking of educational quality. The issues include family decisions about health, nutrition, family size, and child rearing; concerns about the natural environment; preservation of local cultures; and participation in a changing political climate.[140]

Funding cuts

According to a *Washington Post* article, in the 1990s, one of America's most prosperous decades ever, the United States "set a record for stinginess. For as long as people have kept track, never has the United States given a smaller share of its

money to the world's poorest." In 1997, the U.S. government spent approximately $7 billion on nonmilitary foreign aid. That amount was well under 1 percent of the $8.1 trillion gross national product and the lowest percentage of any donor country. [141]

The United States has cut human development programs, which fund developing world education programs, by at least one-third since 1995, according to InterAction, "a deeper and more disproportionate cut than in any other part of the foreign aid budget." Just 1 percent of the U.S. federal budget is devoted to foreign aid, and less than half of that 1 percent goes to fight world hunger and poverty. Education assistance falls into that category.[142] Although basic education has managed to maintain a steady level of funding since 1995 in the USAID budget owing to intense efforts by USAID and education advocacy groups, that amount, according to some government officials and the education community, is only one-third of the amount necessary to support EFA goals.

Some polls have shown that 80 percent of Americans believe that the United States has a moral obligation to support programs that directly benefit the world's poorest people. According to InterAction, each year millions of American demonstrate this belief by volunteering and contributing to help private U.S.-based relief and development organizations like the American Red Cross, CARE, and World Vision. For every $1 that private voluntary organizations receive from the U.S. government, they raise $3 from the American public— in a critical public-private partnership that works to leverage resources and meet human needs." [143]

But voluntary efforts are not enough to meet EFA goals. The arguments are strong, therefore, for the United States to increase its foreign assistance funding, which will benefit basic education goals. Foreign assistance helps save lives and builds peace and prosperity. More than ever before economies, cultures, and people are closely linked. Furthermore, the foreign assistance success record for education alone argues for continued aid to the developing world: literacy rates have almost doubled; primary school enrollment has increased from 48 to 77 percent; and enrollment of girls has more than doubled.

International education NGOs in the United States are committed to assisting the 1.3 billion people in the world who survive on less than US$1 a day. They advocate strongly for increasing the international affairs budget, especially the percentage of funds available for education programs, and for making human capacity-building a primary goal of U.S. foreign policy, with a special emphasis on programs that focus on girls and women.[144]

New educational models

Many in the public and private sectors in the United States are increasingly challenging educators and the general public to "think outside of the box" and consider new educational models to supplement current ones. That challenge is equally relevant to the rest of the world.

Merrill Lynch notes in a 1999 publication, *The Book of Knowledge*, that our knowledge-based economy demands a new view of education. What was once a four-year university course of study will become a 40-year one. Educational content, rather than learners, will be mobile. Educational programs tailored to a learner's needs will replace or supplement standardized ones, and courses by celebrity professors at brand-name universities will be widely available on the Internet. Virtual learning communities will replace isolated learning.[145]

New York Times columnist Thomas Friedman comments on one aspect of the new education model: the connection between education and the Web and the ability of the Internet to break down classroom walls. Friedman notes the quick electronic progression occurring—from e-mail and e-commerce to the absorption of the Internet into all aspects of business to education. The competitive global economy will drive the education phase, as companies grapple with demands to keep improving productivity.[146]

The growing emphasis on supplementary learning systems for learning beyond the confines of school buildings and over a lifetime demands attention at multiple levels, probably simultaneously. While much of the learning without walls will occur after primary school, the entire system from primary school on will be involved. That probably means what Haddad called a "radical systemic change" and will necessitate action on four fronts:

- A reorientation of the curriculum to allow for the best use of information technology.

- An accelerated investment in information infrastructure, including computers, connectivity, electrification, and personnel.

- A program of professional orientation and training so that teachers and administrators can learn to use the technology and integrate it into the curriculum.

- An investment in educational software development. Countries will need to invest in curriculum-related software just as they invest in instructional materials now. Some software can be used worldwide and can thus be produced as a collaborative effort.[147]

Thinking Differently

Thomas Edison did not tinker with candles in order to make them burn better. He invented something new—the lightbulb.

"We don't need to think MORE; we need to think DIFFERENTLY!"
— Albert Einstein

"I skate to where the puck is going to be, not where it has been."
— Wayne Gretzky, ice hockey champion

— from The Book of Knowledge

These are many of the areas in which the United States can assist other nations. Some assistance is already underway. LearnLink, for example, a program that the Academy for Educational Development has implemented with USAID support, has forged new lines of action and created new models for Internet and computer-based learning in countries worldwide. It has established learning information centers and distance teacher training centers that are changing the way people learn beyond the traditional classroom walls.

Middle-income countries

As part of an international cooperative agenda, the United States has become engaged in a relationship, uncommon ten years ago, with certain middle-income countries. The collaboration furthers shared interests such as research and development and public-private partnerships.

Built around trade and globalization, the partnerships entail actors and aspects of education not ordinarily associated with the EFA community. These include bilateral relationships that the United States has entered into with Brazil, Chile, Egypt, Mexico, and South Africa. Some emphasize technology and mathematics rather than literacy.

The partnership with Brazil, for which the U.S. Department of Education is the lead agency for the United States, has resulted in ways for educators, researchers, policy makers, and business people to share state-of-the-art educational information and technology. USAID funds the Learning Technologies Network, a key activity under the partnership. LTNet, as it is called, encourages networking among educators to advance learning through effective use of technology; collaboration for joint research, educational activities, learning, and business ventures; and access to current resources about educational technology.

The United States encourages such bilateral partnerships to build future R&D and technological agendas and welcomes the opportunity to engage in new collaborations at the same time it continues its assistance to developing-world nations, where the vast majority of children are in need.

Countries in crisis

In the post-cold war world, more and more countries are experiencing civil or regional wars driven by nationalistic and ethnic politics. In sub-Saharan Africa, one-quarter of the countries are in conflict and another quarter are in transition from war to peace. Africa is not alone in this state of affairs, as crises in Kosovo, Bosnia, and elsewhere indicate.

Education assistance can no longer be considered a luxury that must yield to attention to other basic human needs during a crisis—food, water, health care, and shelter, for example. They must all exist in tandem. Furthermore, education assistance is important not only during times of crisis but also beforehand, to prevent crisis, and afterward, to ease a country's transition to normalcy. In general, education assistance:

- Responds to the educational needs of refugees.
- Prevents conflict and promotes ethnic tolerance in democratic societies.
- Saves what otherwise might be a lost generation if countries in crisis put educational development of children and adults on hold.
- Constitutes an essential tool for healing the psychological wounds of children and adults who experience brutality, violence, and separation.
- Represents a useful tool for developing the skills necessary for survival and stabilization of communities during the refugee phase and reconstruction in the post-conflict phase.

Some innovative work is already underway in providing assistance to countries in crisis or at risk of it. The Global Information Networks in Education (GINIE), for example, is one such program of potential interest to others. Housed at the University of Pittsburgh, GINIE is a virtual learning community for education innovation. Through Internet-based technology, educators, researchers, practitioners, and donors working in nations in crisis and at risk to disruption gain rapid access to information and expertise. They learn from each other, inform the public, and share locally created materials for policy dialogue, professional development, and classroom exchange.

The United States views conflict avoidance and resolution, and educational assistance to countries in crisis, as areas in which it has experience it can share. It welcomes the opportunity to do so.

FUTURE DIRECTIONS

As the United States continues to improve its own educational system, it remains deeply committed to engagement in international education and to sharing its experiences with others and learning from theirs. The following activities, essential to improving education over the next 15 years, offer opportunities for collaboration with other countries as the nations of the world work together toward the goal of increased opportunities for education for all.

Increase educational quality.

The emphasis should be on *outcomes*, that is, what pupils have learned, and learning must include a range of knowledge and skills for the emerging global, information-based economy. Continuing assessment is an effective means of enhancing quality.

Increase access to formal schooling and other forms of education.

Educational access remains a critical problem for much of the developing world. For the United States, persistence in secondary school, rather than access, is a continuing problem among certain populations. Opportunities for learning beyond classroom walls should supplement classroom programs to make educational access a reality for all children and adults.

Strengthen the skills of new and experienced teachers.

Improved systems to train new teachers as well as enhanced opportunities for continuing professional development for those already in classrooms will result in increased educational access and quality. Certain models with which the United States has had experience—for example, regional development centers for upgrading teachers, teacher mentor programs, and international higher education partnerships—offer possibilities for exploration overseas.

Explore the strengths of various educational technologies and enhance access to them.

New educational technologies offer a means for accessing and organizing knowledge and expanding human potential. Lifelong learning and learning outside the classroom demand easy access to the Internet, to other means of distance learning, and to community resource centers for those without home computers. Learning within the classroom demands effective use of traditional teaching technologies and exploration of the strengths and limitations of new ones.

Increase international comparisons and assessments.

Educational outcomes should meet both national and international standards. TIMSS and similar surveys draw attention to achievement levels internationally and stimulate competition among nations, which can result in increased educational quality.

Pursue an agenda of continuous learning from early childhood on.

Cradle-to-grave learning is becoming the norm. A full-scale program of early childhood activities, formal classroom teaching, workplace educational opportunities, distance learning, and community educational activities must be readily available to all.

APPENDIX

The Authors

Edward B. Fiske is an internationally known education writer and editor who from 1974 to 1991 served as Education Editor of the *New York Times*. In 1991, he published *Smart Schools, Smart Kids* (Simon & Schuster), a highly praised study of systemic school reform in the United States. He is editor of *The Fiske Guide to Colleges* (Times Books/Random House), an annual publication that is a standard part of the college admissions literature in the United States, and co-author of *The Fiske Guide to Getting Into the Right College*. After leaving the *Times* in 1991, Mr. Fiske spent a year in Cambodia, where, among other things, he published a study of the education of girls entitled *Using Both Hands* (Asian Development Bank). He has written extensively on education in developing countries for the Academy for Educational Development and The World Bank, and he has been the principal author of a series of Status & Trends monographs for UNESCO. He and his wife, Helen F. Ladd, an economist at Duke University, spent the first half of 1998 in New Zealand studying that country's school reforms. Their book, *When Schools Compete: A Cautionary Tale*, will be published in March 2000 by the Brookings Institution Press.

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The Report Process

The U.S. Education for All (EFA) 2000 Assessment was prepared for the International Consultative Forum on EFA by an Academy for Educational Development team consisting of co-authors Edward Fiske and Barbara O'Grady and research associate Kate Pearson. The eight-member U.S. EFA 2000 Assessment Report Oversight Commission served in an advisory capacity, meeting three times

over the course of preparing the report and providing valuable insights and information. However, the views expressed in Education for All: A Global Commitment do not necessarily reflect the opinions of the members of the Oversight Commission or the organizations they represent. AED also solicited and incorporated contributions to the report from members of the education and the development community.

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